

出國報告(出國類別：開會)

出席第 4 次日本鰻及其他鰻
科學家會議
及
第 18 屆鰻魚資源養護與管理
國際合作非正式會議

服務機關：農業部漁業署

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出國期間：114 年 6 月 15 日至 6 月 21 日

報告日期：114 年 9 月 19 日

摘 要

日本鰻為臺灣重要高經濟養殖魚種，除了養殖鰻魚，捕撈鰻苗亦為臺灣沿海漁民冬季重要傳統產業。由於鰻苗人工繁殖尚未達量產規模，現階段養鰻產業仍仰賴野生捕撈鰻苗，近年東亞地區鰻苗捕撈量不穩定，來游量對產業影響甚巨，同時國際亦高度關切鰻魚資源量問題，其中國際自然保護聯盟(IUCN)已於2014年將日本鰻列入紅皮書中的「瀕危物種」，歐盟也自105年起持續提出加強調查鰻魚資源量及貿易情形。

鑒於歐洲鰻已於2007年列入瀕危野生動植物種國際貿易公約(又名華盛頓公約，CITES)附錄二管理，進行國際貿易須由生產國提出「無危害證明(NDF)」文件，惟科學組織因無法評估歐洲鰻資源量，致無法判定出口不影響資源量之存續，爰建議不予核發出口許可文件。

基於國際對於鰻苗資源管理日益重視，自2012年起，臺灣、日本、中國大陸等經濟體業於APEC架構下交換彼此鰻魚資源管理之情報，迄今已召開17次「鰻魚資源養護與管理國際合作非正式會議」(下稱鰻魚國際非正式會議)，並於2014年第7次鰻魚國際非正式會議時由臺灣、日本、中國大陸及韓國共同發表「聯合聲明(Joint Statement)」，共同推動鰻魚放養量管控等管理措施，並籌組「永續鰻魚養殖聯盟(ASEA)」，強化落實推動鰻魚產業的自主管理。另各方於2021年第14屆鰻魚國際非正式會議中與會各方同意召開日本鰻及其他鰻科學家會議(下稱科學家會議)，廣邀各國科學家討論東亞地區日本鰻資源養護與管理與研究現況，並以科學根據為基礎，提供鰻魚國際非正式會議相關資源養護管理建議，作為今後東亞各國合作方向，迄今已召開3次。

為了即時掌握國際間動向，我方持續積極參與上開相關會議，加之CITES第20屆締約國大會將於2025年11月24日至12月5日將於烏茲別克召開，歐盟考量歐洲鰻非法貿易猖獗且跨國管理困難，已於6月27日提案將鰻鱺屬納入附錄二管理，並提出決議通過後將延後18個月後實施，我國為避免該決議對我國鰻魚產業造成巨大影響，自113年起，研議進行鰻苗溯源管理，除了

掌握國內鰻苗捕撈量，亦可掌握其後端流向，為核發「無危害證明(NDF)」文件及「合法取得證明(LAF)文件奠定基礎，並於本次會議中進行分享說明。

本次第 4 次科學家會議及第 18 屆鰻魚國際非正式會議分別於 2025 年 6 月 16 日至 17 日及 2025 年 6 月 19 日至 20 日接連於日本靜岡縣濱松市召開，計有日本、南韓、中國大陸及我方等四個經濟體出席，我方由本署鄭又華科長率署內同仁、產業、學界代表及財團法人中華民國對外漁業合作發展協會與會。前開 2 場會議內容分別摘述如下：

一、第 4 次科學家會議

- (一) 本次會議持續由日本東京大學八木信行教授擔任主席及九州大學望岡典隆教授新擔任副主席。
- (二) 東亞四國（中國大陸、日本、韓國與臺灣）之日本鰻捕撈及科學活動概況分享。
- (三) CITES 公約中關於日本鰻及其他鰻現況討論。
- (四) 非會期之任務分組活動報告。
- (五) 以新興科學且實用有效的方式管理東北亞地區的日本鰻資源。
- (六) 針對日本鰻及其他鰻之資源養護管理措施科學建議。

二、第 18 屆鰻魚國際非正式會議

- (一) 本次會議持續由日本農林水產省顧問森下丈二擔任主席。
- (二) 調整議事規則。
- (三) 由第 4 次科學家會議主席八木信行教授報告科學家會議總結。
- (四) 報告第 4 次養殖鰻魚永續聯盟(ASEA)。
- (五) 由各方檢視 2024-2025 年漁季各國鰻魚（含鰻苗）之捕撈、養殖、貿易等相關統計數據，韓國放養量超過 2014 年聯合聲明所訂放養量上限，中國則尚未提交放養量統計資料。
- (六) 審視各國目前採取之鰻魚資源保護管理措施，各國針對國內相關管理措施修正部分進行說明，並進行管理實務意見交流；同時與會成員同意，本年報告將會再次重申第 17 屆非正式會議總結報告中

第 28 段之 2025-2026 年的放養量上限協議。。

(七) 日本分享有關日本鰻及其他鰻於相關國際組織討論概況，並針對歐盟將於今年 CITES 第 20 屆締約國大會提案將鰻鱺屬納入 CITES 附錄二管理，四國將共同撰擬聯合聲明做為遊說其他締約國之說帖；確認歐盟提案後，將會召開線上特別會議。

(八) 各方針對建立具法律約束力之國際/區域性管理組織進行意見交流，日方提議就國際海洋考察理事會(ICES)進行案例研究，並於次屆非正式會議中分享。

(九) 日方提議由該國續辦第 5 次科學家會議及第 19 屆鰻魚國際合作非正式會議，並預定於 2025 年 5 月至 6 月在東京或其他主要鰻魚養殖縣市辦理。

(十) 各方同意發布聯合新聞稿(Joint Press Release)，並附有鰻線捕撈、放養，以及各階段鰻魚貿易統計文件。查聯合新聞稿已於日本水產廳官網發表。

日本水產廳於 6 月 18 日會外時間，規劃參訪濱名湖鰻魚漁業生產組合鰻魚室內循環水養殖技術及現況，並品嚐當地新大型雌鰻品牌 DESICO。

另於 6 月 19 日非正式會議第一天中午休會期間，日本水產廳與我方就鰻苗管制規定相關事宜進行雙邊會議。

關鍵詞：鰻魚資源養護與管理國際合作非正式會議、日本鰻及其他鰻科學家會議、聯合聲明(Joint Statement)、雙邊會議

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壹、目的

近年來，鰻苗捕獲量頻創新低，除衝擊東亞鰻魚產業外，亦引發相關國際組織的關切，國際自然保育聯盟（International Union for Conservation of Nature and Natural Resources，以下簡稱：IUCN）已在 2014 年 6 月 12 日正式公佈將日本鰻列入 IUCN 紅皮書（Red List）之瀕危（Endangered (EN) A2bc）等級，美洲鰻於同年亦被列入紅皮書之瀕危等級，IUCN 雖不具法律約束力，但瀕危野生動植物種國際貿易公約，又名華盛頓公約(Convention on International Trade in Endangered Species of Wild Fauna and Flora，以下簡稱 CITES)，締約國將參考 IUCN 之評估報告後於大會中提案，且自 2016 年起持續關注鰻魚資源狀況及貿易情形，加之 2022 年第 19 屆締約國大會，在水鯊資源無虞，且於區域性管理組織之管理下，仍將真鯊科所有物種列入附錄二管理，首次非針對單一物種進行討論管理，倘鰻鱺屬於大會中被提案，將衝擊東亞地區鰻魚產業。

鑑於國際對於鰻苗資源管理日益重視，且為免鰻魚被列入 CITES 附錄管理衝擊產業，臺灣、日本及中國大陸為西太平洋鰻苗資源之主要利用國家，爰自 2012 年起業於亞太經濟合作（Asia-Pacific Economic Cooperation，以下簡稱 APEC）架構下，分別於日本長崎、菲律賓馬尼拉、中國上海、日本福岡、日本東京、日本札幌、中國青島及南韓釜山等地點召開共 17 次「鰻魚資源養護與管理國際合作非正式會議(The Meeting of the Informal Consultation on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species)」（以下簡稱：鰻魚國際非正式會議），共同進行鰻魚資源管理合作事宜，針對包括鰻魚（苗）捕撈與養殖狀況、生態與資源之資訊搜集及科學研究，以及強化資源管理（包括可追溯性之要求）等資訊交流，並各自訂定管理規範或尋求合作管理之模式，以期復育日

本鰻資源外，避免日本鰻被列入瀕臨絕種野生動植物國際貿易公約（Convention on International Trade in Endangered Species of Wild Fauna and Flora，以下簡稱：CITES）附錄中進行貿易管制。

為向外界表達東亞各經濟體對鰻魚資源養護與管理的決心，前述經濟體於2014年9月第7次非正式會議共同發表聯合聲明（Joint Statement），該聲明除承認日本鰻鰻線捕撈量已持續下降，此下降已推定係棲息地/環境劣化、海洋變遷及過度捕撈所造成；也承認日本鰻洄游至東亞地區的沿岸海域，為此區域共同利用之資源，日本鰻資源的養護及管理需要區域性合作；此外，考量日本鰻在鰻線階段供應量的衰減，已導致其他異種鰻引入東亞地區的養殖池，此現象可能對異種鰻資源造成負面影響；另亦關切儘管部分經濟體已採取措施限制鰻線出口，惟似乎仍有大量鰻線持續在中國大陸、日本、韓國及臺灣間進行交易之事實。

此外，為因應基於動物委員會持續表示應加強調查鰻鱺屬物種的資源及貿易情形，又鰻魚屬跨界洄游物種，資源養護於管理應持續透過國際合作，並應基於具體科學研究之上，臺灣、日本、中國大陸及韓國自2022年起共召開3次「日本鰻及其他鰻科學家會議(The Scientific Meeting on Japanese Eel and Other Relevant Eels)」(以下簡稱：科學家會議)，並邀集各方科學家討論東亞地區日本鰻資源養護與管理與研究現況，並以科學根據為基礎，提供鰻魚國際非正式會議相關資源養護管理建議，作為今後東亞各國合作方向。

為促進鰻魚產業的永續發展，我國、日本、中國大陸及韓國於2025年6月16日至17日在日本靜岡縣召開第4次科學家會議，並接續於同年6月19日至20日在日本靜岡縣召開第18屆鰻魚國際非正式會議，除了檢視鰻魚(苗)捕撈、養殖和貿易數據，交流各國鰻魚資源養護與管理措施、交流日本鰻及其他鰻於國際組織討論概況、交流建立具法律約束力之國際/區域性管理組織意見、研商科學家會議任務分組1及任務

分組2未來工作計畫，並就本次會議共同發布聯合新聞稿，向外界說明四方自2012年起對於鰻魚資源永續之努力及成果；另針對歐盟於本年度CITES第20屆締約國大會提案將鰻鱺屬納入附錄管理一事，將由四方共同撰擬聯合聲明，建議應基於科學數據之基礎下進行討論，反對將鰻鱺屬納入附錄二之管理。

貳、會議過程及結果

一、第 4 次日本鰻及其他鰻科學家會議

第 4 次日本鰻及其他鰻科學家會議於本（114）年 6 月 16 日至 6 月 17 日假日本靜岡縣濱松市 ACT CITY 舉行，計有我國、南韓、日本及中國大陸（線上與會）等四方產官學代表出席（出席名單詳如附件 3）。我國由國立臺灣大學漁業科學研究所韓玉山教授率、本署同仁、財團法人台灣區鰻魚發展基金會葉信明董事長及汪介甫執行長與會。

本次會議由日本東京大學八木信行教授擔任主席及九州大學望岡典隆教授新擔任副主席，旨揭會議討論情形謹摘要列點如下：

(一)東亞四國（中國大陸、日本、韓國與臺灣）之日本鰻捕撈及科學活動概況分享（各國科學家簡報詳如附件 6 至附件 9）：

1. 中國大陸：由宋超（音譯）博士就中國日本鰻產業及科學研究現況進行分享：

- (1) 日方詢問簡報提及「大宗農產品」是否包含所有的農業、林業和漁業食品，宋博士表示這樣的理解是沒錯的。
- (2) 韓方詢問大規模繁殖基地每年可繁殖的親魚數量，宋博士表示每年生產超過 5,000 尾親魚可供繁殖使用，親鰻來源是野外捕撈後進行養成。
- (3) 日方詢問捕獲受標識之鰻魚所使用的漁具，中方說明漁民會使用各種漁具捕撈受標識之鰻魚。

2. 日本：由箱山洋教授分享日本鰻捕撈及科學活動總覽。

- (1) 日方與會者表示，在解讀捕撈資料時應考慮都道府縣的禁漁時間在每年 10 月到隔年 3 月，以及 1990 年以前鰻線漁獲資料包含黑子，再加上鰻魚養殖業者減少。

- (2) 紐西蘭 Shannan Crow 博士詢問如何區分鰻線及黑子，以及是否有黑子的年齡資訊。箱山教授表示沿岸資料主要是鰻線，在場水產研究教育機構福田野步人博士補充說明指出，雖然尚未以耳石分析估算年齡，但從耳石尺寸對應到鰻魚體長在 10 公分以下，通常顯示為黑子。
 - (3) 中方詢問 2025 年的鰻線漁獲量是否有增加，箱山教授回應雖然 2025 年的數據尚未出爐，但 2024 年的漁獲量相比 2023 年有略為增加。
3. 韓國：鄭敬美(音譯)博士分享韓國河口日本鰻鰻線的管理措施現況與空間分佈：
 - (1) 主席詢問為什麼錦江的鰻線密度較高，以及是否有針對韓國南部大型河川進行相關研究。鄭博士回應，尚需進一步分析以確認錦江鰻線密度較高的環境因素；至於韓國南部大型河川，鄭博士表示該河川中鰻線出現率很低。
 - (2) 紐西蘭 Shannan Crow 博士詢問，影響鰻魚到達時間的因素為何，鄭博士表示需要進一步分析才能明確說明。
 - (3) 我方詢問，韓國進行放流計畫的幼鰻體長多大，鄭博士回應體長大於 10 公分；另一位韓國與會者補充說明，放流前會進行 DNA 檢測，以確保放流的物種為單一物種，即日本鰻。
4. 我國：由國立臺灣大學韓玉山教授分享臺灣日本鰻捕撈與科研活動概況：
 - (1) 日方詢問，我方如何解釋自 2019 年以來日本鰻漁獲量上升的趨勢，韓教授說明需要進行更長期的觀察，始能判斷趨勢的走向。
 - (2) 日方要求澄清簡報第 5 頁數據是入池量或是捕撈量，並指出入池量可能同時包含日本鰻及其他鰻，對此韓教授表示，

考慮到所引用的日本養殖新聞報導中只提及日本鰻，並認為入池量等於捕撈量。

- (3) 中方詢問，鰻魚從河川洄游至產卵場的過程中是否會攝食，韓教授回應，觀察到鰻魚腸道出現收縮現象，顯示牠們在洄游期間應該不會進食。

(二)CITES 公約中關於日本鰻及其他鰻現況討論(附件 10)：

1. 本議題由日本水產廳安本玖太郎說明 CITES 相關基礎資料、CITES 中近期關於鰻鱺屬議題、歐盟可能在第 20 屆締約國大會(CoP20)提案將鰻鱺屬提案納入 CITES 附錄二管理，以及納入附錄管理出口的相關程序（包含合法取得證明 LAF 及無危害證明 NDF）。
2. 日方提案次屆科學家會議會將 NDF 納入議題由各方進行意見交換。
3. 日方說明相關貿易需要提交 NDF 的生效日，通常在 CITES 會議決議後 90 天生效，實際上生效日期要依提案及大會決定而訂，以水鯊為例實施日期為決議後一年。

(三)非會期之任務組合活動報告(附件 11)：

1. 長野大學 Leanne Faulks 博士報告任務分組旨在促進東南亞及大洋洲相關鰻魚科學專家間溝通，過去任務分組主要聚焦在兩主題，分別為蒐集日本鰻長期資料，如環境 DNA 或漁獲努力量等，以及鰻魚遷移路徑調查，也就是藉由衛星技術進行標識等。
2. 今年在非會期間未召開線上工作坊，但邀請各方專家協助撰擬鰻線形態辨識指引，後續議題將會進行說明
3. 除了原先研究方向外，也在考慮進行黃鰻及銀鰻在不同棲地的性別比例。

(四)以新興科學且實用有效的方式管理東北亞地區的日本鰻資源

(各國科學家簡報如附件 12 至附件 15)：

1. 講者 1_日本長野大學箱山洋教授：基於族群動態模型的適應性管理方式回顧：

(1) 紐西蘭 Shanna Crow 博士詢問，是否有針對國內或是區域性蒐集成鰻 CPUE 數據。箱山教授回答，鰻線的數據有在都道府縣層級蒐集，但是對於黃鰻的數據則相當有限。

(2) 主席詢問是否適合根據鰻魚早期階段（如鰻線）的數據實施管理措施，例如回饋式管理，因為其他魚類與海洋哺乳類物種的管理決策通常是根據成體階段的資料。箱山教授回應，雖然鰻線的數據有較高的不確定性，但是其族群趨勢與黃鰻具有一定相關性，因此仍可作為管理依據。

2. 講者 2_我國學者代表韓玉山博士：我國報告以日本鰻及歐洲鰻遷移生命史的鏡像比較。(略)

3. 講者 3_特邀紐西蘭專家 Shannan Crow 博士：說明紐西蘭水力發電站之鰻魚補充模式：

(1) 日方詢問短鰭鰻與長鰭鰻的時序漁獲數據之間是否存在相關性。Crow 博士回應，曾觀察到在移除長鰭鰻後，短鰭鰻開始有加入的情形，但尚未觀察到兩種鰻魚之間有明顯的交互作用。

(2) 我方詢問，澳洲與紐西蘭的短鰭鰻是否屬於同一種類，以及短鰭鰻與長鰭鰻在棲地偏好上是否有差異，對於第一個問題 Crow 博士表示，目前沒有相關的遺傳資料，無法提供明確答案，對於第二個問題，短鰭鰻傾向棲息在較高海拔地區，而長鰭鰻則偏好河口地區。

(3) 韓方詢問以下三點(1)幼鰻補充放流計畫中如何運輸(2)紐西蘭是否進行鰻魚人工放流(3)紐西蘭的鰻魚族群規模。Crow 博士對每個問題給了以下答案：

- a. 使用冰盒將鰻苗運送到更上游、有傳統漁業的地方；
 - b. 不進行鰻苗放流；
 - c. 族群規模仍未知。
- (4) 日方詢問，是否有與鄰近國家進行鰻魚相關合作研究，以及 Crow 博士自身研究或鰻魚管理中，是否有經驗可以進行分享，博士回應目前尚未進行此類國際合作，並強調長期資料的觀察及蒐集非常重要。
4. 講者 4_日本水產研究教育機構福田野步人博士及橫內一樹博士：
- (1) 日方詢問受測鰻魚的年齡範圍為何。橫內博士回應，鰻魚樣本屬銀鰻階段，年齡範圍與一般日本鰻年齡相符。
 - (2) 我方請橫內博士就其與以往研究結論之間的差異發表看法，因為前者發現更多棲息於河流的鰻魚，為何本研究顯示有較多河川棲息型鰻魚，而過去塚本博士研究成果則認為有 60-70% 為海洋型鰻魚。橫內博士回應，尚需進一步研究才能得出具體結論；我方另外詢問為何在高海拔地區會有較高比例的河口棲息型鰻魚，橫內博士解釋，鰻魚可能會避開低溫水域，而選擇生產力較高、條件較適合的棲地，這些棲地往往位於河口，而非高海拔的河川。
 - (3) 日方詢問，鰻魚是如何區分棲息型與棲地轉換型，橫內博士回答，可透由耳石中的鋇鈣比變化加以辨識，兩種類型的鰻魚耳石會呈現明顯差異。

(五)針對日本鰻及其他鰻之資源養護管理措施科學建議(附件 16 至附件 18)：

1. 鰻線物種辨識指引

- (1) 秘書處說明，在去年的非正式四國會議中，日方提議制定鰻線的物種辨識指引，經與會成員同意，在會期及未來科

學家會議及該提案將於閉會期間、科學家會議及非正式會議中持續進行討論；在閉會期間由工任務分組一負責撰寫指引草案。

- (2) 秘書處表示，日本已於第 4 次科學家會議第一天提供指引草案修訂後版本，此次更新修訂僅刪除與鰻線形態辨識無關的內容（此次更新修正日方已在會前預先知會我方，並由我方先行檢視後無意見，日方才發送給與會者會中檢視討論）。
- (3) 由辨識指引的共同作者 Dr. Huỳnh Quang Thiện 博士介紹修訂後草案。
- (4) 日方建議本次討論應聚焦於鰻線的形態辨識，並指出如無必要，任務分組一不應延伸至與物種鑑別無關的議題（如鰻魚漁業），經本次科學家會議通過後的辨識指引，後續也建議經過非正式會議中討論。此外，日方鼓勵任務分組持續精進指引，並加入更詳盡物種特徵等相關資訊。
- (5) 我方建議在指引中加入物種之體全長，以協助物種辨識。
- (6) 作為共同作者的箱山洋教授說明，將鰻魚漁業資訊納入指引的用意，認為這些背景資訊有助於物種判別；另一位共同作者 Leanne Faulks 博士則建議，可向海關人員徵詢回饋，並據以改善指引。
- (7) 日方表示，有些日本鰻線尾鰭上會有微弱的色素沉積狀況。
- (8) 韓方建議，最好對鰻魚品種進行形態學和 DNA 分析比較，以支持形態學指南。對此，Dr. Huỳnh Quang Thiện 博士解釋，指南可提供無 DNA 分析設施的海關實用性。
- (9) 共同作者箱山洋教授詢問本指引的使用對象為何，秘書處回應，不僅限於海關人員，但仍須在本次科學家會議與非正式會議中進一步討論釐清。最後與會成員一致同意將指

引提交至非正式會議中進行討論，認為未來仍需持續完善指引，將會於非正式會議中明確指示指引的使用目的及對象。

2. 定義鰻魚不同生活史階段

- (1) 秘書處介紹 CITES 年度報告撰寫及提交準則中，歐洲鰻的貿易稅則相關資訊（包含 ccc code 品項之定義）。
- (2) 水產科研教育機構福田博士介紹其研究「鰻線色素沉積階段與體型比例之評估」。
- (3) 日方詢問本次關於鰻魚生活史階段定義是針對哪一物種，秘書處回應將會特別聚焦在日本鰻；另位日方代表提議可將重量作為鑑別不同生活史階段的額外參考，福田博士支持此建議，並表示將會進一步探討應用之可能性。
- (4) 與會科學家會對於日本鰻生活史階段的基本定義，特別是在黑子與黃鰻之間的分界已達原則共識。

3. 鰻線及鰻苗初次入池量上限

- (1) 秘書處說明，如同 2014 年舉行的非正式會議，根據 2013-2014 年的放養量 8 成訂定了各國放養量上限，過去 10 年未針對上限進行調整，主要係缺乏足夠的科學基礎來進行調整。
- (2) 日方提議，未來科學家會議基於具體科學數據，提供意見予非正式會議，以進行放養量上限調整之研議。

(六)關於 2025 年至 2026 年日本鰻及其他鰻的科學活動與合作研究未來工作計畫(附件 19)：

1. 任務分組 1.負責人 Leanne Faulks 博士介紹科學活動與合作草案工作計畫。
2. 與會成員一致同意，各任務分組將依據草案工作計畫所提建議推進相關工作。

3. 秘書處介紹任務分組職責範圍修訂草案。
4. 與會成員一致決議，將任務分組負責人姓名從職責範圍文件（TOR）中刪除，而改將其姓名列入工作計畫中。

(七)次屆科學家會議時間與地點：

1. 秘書處說明次屆科學家會議確切時間將於第 18 屆非正式會議中討論進行商討。
2. 秘書處詢問與會者，希望邀請哪些類型專家參與次屆會議。日方提議邀請糧農組織(FAO)的 Kim Friedman 博士作為特邀專家，與會成員對此無異議。

(八)會外交流：日本水產廳漁場資源課生態系保全室小川太輝課長輔佐於會外私下洽我方表示，本次非正式會議內水面漁業振興室長生駒潔不克參加，另日本經濟產業省將派員參加非正式會議，因此水產廳想邀請我方於 6 月 19 日非正式會議第一天中午休會期間另闢會議室，與我方就鰻苗管制規定相關事宜交換意見。

二、第 18 屆鰻魚養護與管理國際合作非正式會議

第18屆鰻魚養護與管理國際合作非正式會議於本（114）年6月19日至20日假日本靜岡縣濱松市ACT CITY舉行，計有中國、南韓、日本及我國等四個經濟體出席（出席名單詳如附件22）；中國由中國水產科學研究院東海水產研究所蔣科技教授率團、南韓由海洋及漁業部 Kim Young-Min資深副主任率團、日本由水產廳漁場資源課生態系保全室坂本孝明室長率團，我國由鄭又華科長率本署同仁及財團法人中華民國對外漁業合作發展協會傅家驥組長與會出席（國立臺灣大學漁業科學研究所韓玉山教授、高雄科技大學漁業科技與管理系侯清賢副教授兼永續漁業發展研究中心主任、財團法人台灣區鰻魚發展基金會葉信明董事長及汪介甫執行長列席）。本次會議秘書處由日本水產廳及Global Guardian Trust共同組成，並執行會議安排。

會議主席由日本農林水產省顧問森下丈二擔任（第三年擔任主席），開場歡迎各經濟體與會，日本水產廳生態保全室坂本孝明室長代表地主國開幕致詞，並邀請中國、韓國及我方代表團團長介紹與會團員後致開幕詞（附件 25）。會議討論情形，謹摘要如下：

（一）調整議事規則：

1. 原訂的「暫行議事規則（Tentative basic rules of meeting procedure for the informal consultation）」，日本希望取消「暫行（Tentative）」字眼。
2. 本議題經與會成員表示同意。

（二）第 4 次日本鰻及其他鰻科學家會議總結報告：

1. 第 4 次日本鰻及其他鰻科學家會議總結報告，由該會議主席八木信行教授簡要說明是日會議出席成員及科學家研究成果分享、CITES 公約中關於日本鰻及其他鰻現況、針對日本鰻及其他鰻之資源養護管理措施科學建議等。
2. 第 4 次科學家會議通過由任務分組撰擬的鰻線物種辨識指引，

未來將會持續完善；以及未來科學家將會基於具體科學證據，提供建議予非正式會議，以進行放養量上限修訂之參考。

3. 日方表示為了提供物種辨識指引供海關人員及養殖業者參考，感謝科學家對此的努力，同時希望物種辨識指引增加更多資訊（如體長等）及更多物種；另外定義生活史階段，為了使各參與方的定義一致，希望科學家持續進行研究。此外，秘書處進一步說明，辨識指引並非科學研究，除了提供海關人員參考，亦可提供養殖業者等其他人員進行參考。
4. 中方建議由科學家共同建立工作團隊交換日本鰻人工繁殖技術相關意見及資源。日本回應表示，目前要將鰻魚人工繁殖作為野生資源管理的一環來處理，時機尚屬過早，因為在 CITES 的發展背景下，物種識別指引與野生資源管理的相關議題更為緊迫與重要。此外，科學會議主席指出，中國已在第 4 屆科學會議的議程項目 4 中提供了關於鰻魚人工繁殖的資訊，但建議不將該議題列為科學會議的新議題項目。其餘與會成員對此看法未表示異議。
5. 與會成員也認同物種識別指引應具備使用者友善性的重要性。該指引的目標使用者預期包括各類利害關係人，例如第一線的海關人員、漁民、養殖業者以及零售商等。
6. 有關第 4 次日本鰻及其他鰻科學家會議總結報告經與會成員無異議通過。

(三)報告第 4 次養殖鰻魚永續聯盟(ASEA)

1. 秘書處提供 ASEA 預計在今年夏天（可能為 8 月或 9 月）舉辦的資訊，並考量歐盟可能會在締約國大會提案將鰻鱺屬納入 CITES 附錄管理下，規劃以 ASEA 名義撰寫一份產業聲明，提交 CITES CoP20，作為避免納入附錄管理之說帖。
2. 由於現階段歐盟動態尚不明朗，此份聲明可能會受到歐盟動態

而修改，經與會會員一致同意，在 ASEA 提交聲明予 CITES 前，會先行提供非正式會議所有會員分享並進行審閱，倘 CITES 不接受此份聲明，則由日本以國家資訊文件進行提交，依據規定，CITES 無權拒絕接受會員國提交資訊文件。此想法經我方表示支持；中方及韓方同樣支持日本提案，但要求日方在提交前應先與會員分享提交內容。

3. 秘書處強調，此份聲明係以 ASEA 名義所擬定之聲明，非本次非正式會議之聯合聲明，即使非正式會議會員可以進行審閱，但應尊重 ASEA 作為獨立個體的立場及決定。

(四)檢視 2024-2025 年漁季鰻魚（含鰻苗）之捕撈、養殖和貿易統計數據更新(附件 27)：

1. 秘書處解釋更新之鰻魚捕撈、放養及貿易統計資料，有一個會員國（韓國）放養日本鰻玻璃鰻超出了上限，另有一個會員國（中國）尚未提交 2024 - 2025 年漁期的玻璃鰻養殖放養統計資料。
2. 中方說明其資料尚在彙整中，預計今年 7 月完成官方數據更新及公布，將會提供給與會會員(日方已於 8 月 21 日提供中方資料如附件 28)。
3. 日方強調鰻線放養量上限為重要管理措施，同時也是主張不要將所有鰻魚物種納入 CITES 附錄管理的必要措施，並要求針對超額放養應提出補救應對措施。
4. 韓國表示會將超出之放養量進行放流，經日本進一步詢問，韓國確認將會放流 7.42 公噸，已在今年 3 月開始執行放流計畫，預計會執行 3-4 次，放流的個體規格超過 10 公分，放流總量會達到 7.4 公噸；韓方針對此超額放養情況表示，並未預期到本季鰻線數量會如此多，內部刻正進行系統性的調整及改善，也從產業界收到更多細節資料，針對超出預期的情況，在今年

五月已經開始與政府相關單位及產業界討論，並規劃建立相關機制或政策，以利因應並預防類此情況再次發生。

5. 主席要求中方及韓方持續調查並提供相關資料予其他會員，同時強調，因為任何會員都有可能發生超額放養的情況，因此分享因應超額放養之補救應對措施是非常重要的，與會會員對此主張沒有異議。

(五) 鰻魚資源保育措施(附件 29)：

1. 中國：

- (1) 關於鰻魚相關管理規定與去年類似無變動。
- (2) 日本向中國提出兩點詢問：(1) 對於長江實施的十年鰻線禁捕令是否有效；(2) 在進一步發展針對鰻線投入養殖池的上限管理措施方面的進展。
- (3) 中國就第一點回應表示，已針對禁捕令的成效進行監測，並觀察到長江及其支流的成鰻、其他魚類與貝類等資源均有增加的跡象，並將在未來與會員分享最新發現。針對第二點，中國概述了幾項管理措施：(1) 省級層面對鰻魚捕撈的管控，包括漁業執照數量、漁網尺寸與數量、禁漁期及禁漁區等限制；(2) 由省級政府與中央政府與利害關係人合作實施的鰻線投入限制；以及(3) 環境保護相關作為，例如針對廢水排放的規範。

2. 日本：日本資源養護管理措施與去年大致相同，並額外說明其保育與管理措施，其中包括對超過鰻線投入上限的養殖業者，處以最長 3 年有期徒刑或最高兩百萬日圓罰金的處罰。此外，日本也宣布自今年 12 月起，將鰻線納入水產流通適正化法適用對象，屆時將要求提供多項文件，包括證明鰻魚係合法捕撈之證明文件。

3. 韓國：表示刻正執行降低許可鰻魚養殖戶數量的計劃，爰修正

具許可養殖業者數量從 646 降低為 614，並表示統計資料截至 2024 年。

4. 我方：

- (1) 說明關於資源養護與管理措施與去年相同，但想藉此機會更新一項保育與管理措施進展，我方規劃在今年年底，也就是下一漁期開始逐步推動溯源系統，要求漁民透過行動裝置之溯源系統申報漁獲量，販運商也透過系統進行交易數量申報等，透過此方式，即時掌握漁獲狀況；同時，鰻魚養殖業者申請鰻苗放養時，必須出具溯源系統所產製的交易證明資料，關於溯源系統建置規劃，已納入本年度聯合新聞稿中。
- (2) 經與會會員同意，今年的報告將會再次重申第 17 屆非正式會議總結報告中第 28 段之 2025-2026 年的放養量上限協議。
- (3) 中方表示，倘未來鰻苗資源量持續增加，我們可以視情況進行科學評估，並基於資源永續及保育的前提下，進行放養量上限調整的可能。
- (4) 日本強調做好打擊鰻魚非法捕撈、走私及非法貿易等必要措施，有助於說明 CITES 將所有鰻魚物種列入附錄二並非必要。

(六)有關日本鰻及其他鰻現況：

1. 日方報告 CITES 的狀況：由日本水產廳說明 CITES 運作模式、CITES 動物委員會（Animals Committee）第 33 屆會議與常設委員會（Standing Committee）第 78 屆會議就鰻魚物種的管理、鰻鱺屬可能於第 20 屆締約國大會（CoP20）被提案納入 CITES 附錄二管理，以及納入附錄管理出口的相關程序（包含 LAF 及 NDF）等議題進行說明。
2. 如日本鰻被列入 CITES 附錄二管理之應對行動：日方報告

CITES 的狀況(附件 30)：

- (1) 日本提出以下幾點意見：(1)所有成員應開始思考鰻魚物種被列入 CITES 附錄 II 後，如何核發合法取得證明 (LAF)，並指出日本與我方計劃實施加強鰻魚的可追溯性；(2)要求各成員鼓勵其科學家在下次科學會議上參與 NDF 的相關討論；(3)建議在會期以外時間舉行線上特別會議，對於歐盟提出將所有鰻魚物種列入附錄 II 可能決定（包括在歐盟提交提案後提出保留）進行意見交換，並討論應對行動。
- (2) 主席提出以下三項建議：(1)成員對歐盟提出將鰻鱺屬列入 CITES 附錄 II 的提案持共同反對立場；(2)成員應開始在會議期間準備 LAF 與 NDF 的相關作業；(3)在本次會議決議後，於會期外進一步討論後續行動。
- (3) 與會成員表示支持上述建議，包括今夏為因應 CITES 第 20 屆締約方大會召開線上特別會議的建議。

3. 因應 CITES CoP20 提案策略(附件 31)：

- (1) 日本提出「非正式會議致 CITES CoP20 聯合聲明草案」，並建議在歐盟正式提出將所有鰻魚物種列入《附錄二》的提案後，對該聯合聲明進行更新。日本提議，各成員應依更新後的聯合聲明於今年 7 月上旬至中旬發布新聞稿。此外，日本指出，該新聞稿將參考 8 月或 9 月公布之糧農組織 (FAO) 專家諮詢小組報告後再次修正，並表示最終版本的聯合聲明將由日本代表非正式會議提交給 CITES 締約方大會作為資訊文件。
- (2) 我方對於是否有必要發布兩次聯合聲明提出疑慮，並建議待聯合國糧食與農業組織 (FAO) 專家諮詢小組發布評估報告後再發布聲明。對此，日本回應表示應儘早開始行動遊說各國，並強調聯合聲明作為會員共享立場平台的重要

性。

- (3) 韓國原則支持日本提案，惟表達了兩項顧慮：（1）韓國政府的新聞稿主要是面向國內受眾，對國際的實質影響可能有限；（2）需與其他相關部會進行磋商。中國則呼應韓國立場，指出同樣需要與國內其他主管機關進行內部協調。
- (4) 針對前述討論，日本提出修正後的計畫：在歐盟正式提案後，日本將視情況修正聯合聲明草案，並與其他會員進行協商。在所有會員對聲明內容達成共識後，各會員依該內容推動各自目標，例如向 CITES 其他締約國爭取支持。此外，日本將於夏季召開線上特別會議，進一步討論如何因應 FAO 專家諮詢小組的報告內容，獲與會成員支持。
- (5) 日本「全日本持續的養鰻機構（All Japan Association for Sustainable Eel Aquaculture Incorporated）」強調遵守鰻苗放養上限的重要性，並呼籲會員國盡最大努力避免將所有鰻魚物種列入 CITES 附錄 II。

(七)有關建立具法律約束力之國際/區域性管理組織(附件 32)

1. 日方說明三種區域性漁業組織類型的架構，另提出組織目標、管轄魚種、秘書處設置等清單以利各方討論。日方提議就國際海洋考察理事會(ICES)進行案例研究，並於次屆非正式會議中分享。
2. 會員認同持續討論此議題對於鰻魚資源養護與管理之重要性，同時對日方允諾在次屆非正式會議提供 ICES 案例研究表示感謝。

(八)未來工作計畫(附件 33)：為因應歐盟可能提案，需要針對 FAO 專家諮詢小組審議意見進行聯合新聞稿草案修訂，將會於本(2025)年夏季 CITES CoP20 之前，以線上方式召開特別會議，並修正工作計畫。

(九)下屆科學家會議及鰻魚國際非正式會議時間及地點：日方提議第 5 次科學家會議及第 19 屆非正式會議由該國籌辦，另比照本次會議模式接連舉辦，並預定於 5 月至 6 月在東京或其他主要鰻魚養殖縣市（如愛知縣）辦理，獲各方同意。

(十)其他討論事項：無

有關中國提案推動國際聯合研究合作計畫，俾中國研究人員向中國科技部爭取研究經費，主席鼓勵科學家在會議期間就潛在研究主題及可能方案進行討論，並持續開放討論。

(十一) 聯合新聞稿(附件 34)：

1. 秘書處概要說明聯合新聞稿草案，並表示相關統計資料將隨聯合新聞稿與會成員討論最終聯合新聞稿，包含鰻魚（含鰻苗）之捕撈、養殖和貿易統計數據及及鰻魚資源養護與管理措施總結。
2. 聯合新聞稿已進行部分修正。

(十二) 會中觀察與會外交流情形：

1. 與中方交流：中方團長仍為蔣科技教授(與上屆非正式會議相同)，團員除團長外，其餘 2 名為產業代表、1 名為傳譯，對我團態度友善。蔣教授表示原訂漁業漁政局周迅副處長擔任團長，惟近期中國官方人士出國審批程序繁瑣且管制嚴謹，因此周迅副處長無獲准出國參加。
2. 與韓方交流：本次韓國代表團成員已全數更換，與南韓海洋及漁業部 Kim Young-Min 資深副主任進行短暫交流（負責內陸養殖，包括鰻魚及虹鱒），本次韓國團員多為外部研究機構，與我方交流友善。

三、會外臺日鰻魚雙邊會議

本署於本（114）年6月19日於第18屆鰻魚國際非正式會議會外，中午12時40分假日本靜岡縣濱松市濱松 Act City大樓 the congress center room 51，召開臺日鰻魚雙邊會議，就臺日鰻苗出口管理措施進行雙邊會談，日本由日本國水產廳栽培養殖課內水面漁業振興室內水面企劃班 堀端要仁課長輔佐、漁場資源課生態系保全室 小川太輝課長輔佐及經濟產業省貿易經濟安全保障局貿易管理補農水產室 中村拓室長輔佐出席，我國由鄭又華科長率本署同仁、財團法人台灣區鰻魚發展基金會葉信明董事長及財團法人中華民國對外漁業合作發展協會傅家驥組長及與會出席。會議紀要如下：

(一)有關臺日鰻線、鰻苗及幼鰻(下稱鰻苗)出口相關規定

日方發言：

1. 有關鰻苗出口議題，本(114)年度民間已進行多次交流，如 5 月 13 日於東京召開之 2025 日臺鰻魚貿易會議中，雙方業者對鰻苗出口議題開始有較正面的交流與討論，並提及以對等方式進行管制，即依日本現行鰻苗入池量達放養量上限 21.7 公噸的 50%時，始開放鰻苗出口，臺灣業者回覆可考慮比照日本管制措施，臺灣國內鰻苗入池量達放養量上限 10 公噸的 50%時始開放出口。
2. 另於今年 3 月 18 日於台北召開之 2025 臺日鰻魚業民間協議會(下稱鰻魚民間協議會)中，日方業者拋出如日本解除放養量需達上限 50%始開放出口規定時，臺方是否能排除反對鰻苗出口的聲音而解除鰻苗出口管制。目前有關鰻苗開放出口議題僅限於民間交流層次。日方希望與臺官方進行確認，如果日方解除鰻苗出口限制，臺灣是否可以比照解禁？解禁需要多久時間進行，以及是否需要修改相關法規，後續相關法制作業期程？

我方發言：

1. 感謝日方安排在第 18 屆鰻魚資源養護與管理國際合作非正式會議的空檔邀集我方召開雙邊會議。記得本年 3 月 18 日於臺北召開之鰻魚民間協議會中，一般社團法人 全日本持續的養鰻機構 保科正樹理事長（時任專務）向我方業者提出，倘日本完全解除鰻苗出口限制，我方是否能對等解除鰻苗管制措施。當時我方業者提出疑慮，如日本對所有國家解禁，將無法確保我國可以從日本取得足夠的鰻苗，以因應產業所需。另以本(2024-2025)年度漁期的靜岡縣為例，因鰻線豐收而停止捕撈，因此我方業者擔憂如鰻苗開放出口後，倘當年度鰻苗全數出口，又日本後續無鰻苗提供我方，導致我方無苗可放養，爰請日方能對鰻苗供應我方業者之保證措施提出明確的作法，當時日方於現場表示會攜回研議。
2. 我方對於鰻苗管理，均秉持朝向貿易透明化，並確保產業所需之前提下推動措施，爰我方刻正建置鰻苗溯源系統，並期盼與日方水產流通適正化法相關措施介接。
3. 本年 3 月 6 日水產廳大森亮室長、生駒潔室長及堀端要仁課長輔佐來臺進行臺日鰻魚雙邊會談時，我方也提及刻正規劃建立鰻苗溯源系統並期望與日方進行串接及合作。說明我方目前規劃輸出業者須取得該溯源系統產出之合法證明文件始得出口，如同 Legal acquisition findings (LAF)。因此期望未來日方在進口通關時認明我方出具之合法證明文件始得進口。
4. 我方鰻苗溯源系統現已完成卸魚聲明 APP 建置，刻正規劃與中間鰻苗販運商（含鰻苗暫置場）進行產業溝通及串接，以擬定溯源架構與規範，預計本年 6-7 月間完成相關法規草案，屆時將邀集相關業者辦理說明會，希望能在本年底的漁期推動溯源制度。

5. 我方諒解現階段的日本水產流通適正化法係為解決日本國內 IUU 問題，暫無打算納入國際貿易部分，但我方期盼日方未來要求日本業者購買臺灣鰻苗時，僅購買經我方溯源系統認證的鰻苗，以利我方販運業者配合溯源系統之政策。

日方發言：

1. 本年與例年不同為鰻線豐收之特殊狀況，本以為很早會達到放養量上限 50%，但鰻線來游較例年為早，養殖業者尚未完成養殖池整備無法入池，故導致像靜岡縣停止捕撈的情形。所以 3 月鰻魚民間協議會有臺方業者認為，如果日本仍維持放養量上限 50% 限制，將致臺灣無苗可買，因此臺灣應同等設定相關限制。
2. 如臺灣比照日本設定放養量上限 50% 限制，是否待鰻苗溯源系統完成建置後，才能確認達到放養量上限之 50%（我方回應是的）。因為本年鰻線豐收，臺灣才有可能達到放養量上限 50%（我方說明 4 月底前第一階段放養也尚未達到 50%，僅放養約 3 公噸。5 月日臺鰻魚貿易會議及日本養殖新聞所報載放養 9 噸係養殖業者下訂單量，並非實際入池量），但例年臺灣放養量皆無法達放養量上限 50%，故倘臺灣設置該出口條件，對臺日雙方的鰻苗交易議題不會有實質進展。
3. 另詢問臺灣鰻苗入池規格是否以 200P 重量計算，其放養量之估算方式（我方回應放養量是以回推鰻線規格計算）。相當於臺灣實際上無法即時掌握鰻線捕撈量，僅能自入池量進行推算，所以雙方設定須達放養量上限 50% 的條件才開放，對臺日彼此的鰻苗供給無實質幫助，因此日本業者期盼能解除出口限制。
4. 如日方解除放養量上限 50% 出口限制，是否能說服臺灣業者開放鰻苗出口。

我方發言：

1. 臺灣的部分鰻苗出口業者對鰻苗開放出口持正面態度，但基於對產業瞭解，除非日方要求鰻苗進口需要檢附相關合法來源證明文件，方能促使產業配合本署執行溯源系統制度。
2. 此外，我方當初設定鰻苗出口管制規定，係基於確保鰻苗資源保育，盼能藉由溯源系統建置，除即時掌握鰻線捕撈量外，同時也能累積具體科學數據向外界（包含保育團體等）說明，並確保所有出口鰻苗為合法捕撈，以確保資源永續利用。

日方發言：

1. 日方瞭解鰻苗溯源系統是朝向鰻苗交易透明化非常重要的關鍵，也瞭解鰻苗開放出口不可能在此次雙邊會議達成。本議題後續尚需持續與產業及相關部會協商，但雙方各退一步向前邁進也是非常重要的，希望臺灣出口管制規定不要走向設定放養量上限 50%之條件，而是以完全自由貿易的方向努力。

我方發言：

1. 我方也瞭解設定該條件，對朝向鰻苗交易透明化無實質效果，不會浪費行政資源推動無謂的事，因此希望能早日實踐鰻苗溯源的目標，蒐集更多具體鰻苗資源科學數據，未來依據科學數據與各產業團體研議出口管制期間或捕撈漁期之調整。

日方發言：

1. 3 月的日臺雙邊會議中，臺方請日本提供水產流通適正化法的運作及推動的相關資訊。日方的溯源系統係由全日本持續的養鰻機構執行及推動，將會請該機構與我方分享。
2. 水產流通適正化法目前尚未規劃與臺灣進行介接，但經過本次會議瞭解溯源介接對臺灣之重要性，會攜回水產廳內部研議，未來朝此方向進行推動。

(二)其他議題

日方發言：

1. 近期日本新聞輿情報導因日本愛吃鰻魚而助長鰻苗 IUU（含走私）的情形，因涉及國際形象，日本外務省特別要求水產廳要嚴正應對此議題，下午日方也會於非正式會議中分享。
2. 小川私下透露，日本媒體自行派員到歐盟布魯塞爾蒐集訊息，據瞭解歐盟正在做將鰻鱺屬列入 CITES 附錄二提案前的準備，但目前日本外館尚未收到實際確認的消息。

參、會外參訪

本團於6月18日經由日本水產廳安排前往參訪靜岡縣濱松市濱名湖養魚漁業協同組合及濱名湖鰻魚漁業生產組合水野竜先生，由於濱名湖為海水及淡水交會鹹水湖，可以捕撈養鰻所需玻璃鰻，同時具有天然環境優質，造就其養鰻盛名，該地區主要以溫室養殖。謹就參訪觀察及意見交流紀錄如下：

一、濱名湖養魚漁業協同組合：

外山昭廣組合長說明協同組合養鰻現況，以及濱名湖地區養鰻業者面臨玻璃鰻資源減少、國際規範日益嚴格、生產成本上升等情況，為確保產業存續，創立新品牌DESICO，透過使用大豆異黃酮飼料，使鰻魚雌性化，使肉質維持柔軟度及飽和度，不受季節影響，以該品牌進行販售之鰻魚需要通過其訂定的標準(包含活體時的外表初步篩選，到後續宰殺、烤製及試吃等)，以確保產品品質穩定，透過此技術的進步，濱名湖鰻魚市場從過去關東地區，逐漸打入關西市場。

同時，為了使鰻魚養殖產業永續，該組合與日本水產廳、水產研究與教育機構及日本養鰻漁業合作社聯合會共同推動種苗育成與放流資源復裕研究計劃，培育可完成洄游產卵之鰻魚；此外，亦加入濱名湖親鰻放流協會，於產卵季節透買並放流成熟銀鰻。

進行為強化流通與市場機制，刻正推進濱名湖振興計劃，由多方利害關係人組成委員會主導，主要推動現代化加工與包裝設施、為出口做準備（包含HACCP等國際認證）及改建老舊設施等，為了獲得政府補助，須先設定明確經濟成效，使生產者的收入大約提升 10%，達到此目標後經過審核通過，始能獲得領取補助經費資格。

經過現場提問，組合進一步說明，DESICO品牌在2024年11月24日創立，但實際上是販售本季漁期放養的鰻苗，所以是在今年新鰻成熟後才開始進行販售。

二、濱名湖鰻魚漁業生產組合(水野 竜先生)

(一)種魚放流計畫：

由政府的水產部門主導，提出種魚放流計畫，再由地方協助推動。在近年的養殖過程中，業者及研究者開始希望讓做為放流用的養殖鰻魚更加接近天然鰻魚的品質及外觀，藉由野生鰻魚在冬天水溫降低時會進入類似冬眠的天性，在室外的池塘中，透過減少餌料與模擬自然環境，讓鰻魚的外觀及行為更加貼近野生鰻魚，雖然現階段對於成熟度的指標，以及放流後是否順利回到海洋等相關數據尚未完全，但就目前來看，已經幾乎接近野生鰻魚的性狀了。

目前設有 4 個露天養殖場，目的是營造天然環境來飼育鰻魚，使其接近天然鰻魚的生態，俾利日後放流之用。該處水池可與濱名湖連結，可以觀測湖水起落，同時湖中的浮游物亦會流進池中，作為生態鰻魚的食物，爰無須投餵飼料。據場主表示今天該露天池計有 2 萬尾鰻苗流入(全數做為放流用)。

去年 11 月，首次將「實驗性室外池」地區養大的鰻魚，共計 150 條，成功放流到天龍川的河口。最重要的一點，此計畫是由玻璃鰻業者、養鰻業者，以及販售鰻魚業者在內，從上游（捕撈）、中游（養殖）到下游（銷售）的各方業者共同協作，形成一個完整的產業合作體系，共同合作並推動這項計畫。

(二)室內養殖規模：

養殖方式為傳統溫棚養殖，每池400平方公尺，放養1萬尾，育成率約90%以上，採全年養殖，以循序漸進的方式進行出貨，並非專門針對「土用丑日」集中出貨，去年12月入池，今年9月出池，填補節日後市場缺魚的空缺。

水溫維持在攝氏31-32度，水色相對清澈，由於今年氣溫較高，為穩定室內水溫，於室內加設黑蘭花網遮陰，減少陽光直射，降低溫室內部溫度，同時也有效抑制藻類滋生，故使水質維持相對清澈狀態。

投餵鰻粉加配合性粒狀飼料(價格約為每包11,000日圓／20公斤，換算每公斤鰻魚之飼育成本約為2,500日圓)，利用省工飼料攪拌機混合，再透過電動運搬車，開進養殖場分送鰻料，並做有詳細庫存表，計畫性選別分養及調配出貨。

肆、心得及建議

一、會議觀察與心得

此次出席在日本靜岡舉行的第 4 次日本鰻及其他鰻科學家會議以及第 18 屆鰻魚資源養護與管理國際合作非正式會議，除了與往年相同之基本議題外，考量到 2024 年度鰻苗來游量大增，各國捕撈量及放養量趨勢不同，以及歐盟提案將鰻鱺屬納入附錄二管理，本次會議更進一步討論如何完善資源養護，補救超額放養之情形，以及因應歐盟提案之相關措施，以確保鰻魚在基於科學基礎下進行有效管理，得以永續利用。以下是此次 2 場會議綜合性重要觀察與心得：

（一）日本鰻資源調查之重要性：

1. 依據本年度會議統計資料顯示，除中方外其餘三方 2024 年度捕撈量均高於過去 7 年，加上歐盟已於 6 月 27 日正式提出將鰻鱺屬納入附錄二管理之提案，有必要透過深化科學合作，使資源養護管理措施基於強而有力之科學數據基礎下，進行研議及調整。
2. 考量到近年國際推動溯源之趨勢，我國於 2024 年即開始研議進行鰻苗溯源管理，加之面臨附錄二管理之不確定性，推動鰻苗溯源制度勢在必行，亦可因應後續以利後續因應鰻魚國際貿易須出具產地證明及無危害證明等管理作業。

（二）科學研究與數據分享：

1. 各國代表分享了有關鰻魚資源的最新研究成果與數據，包括中國、日本、韓國和臺灣的鰻魚捕撈及養殖情況，受到去年漁季捕撈狀況影響，本次會議強調進行超額放養之補救應對措施之重要性，以對外說明四方持續遵守 2014 年發佈之聯合聲明所定放養量上限，韓國將於後續將超額放養部分，全數放流至野外，以增裕鰻魚資源。

2. 本次科學家通過由任務分組編撰之鰻線物種辨識指引及不同生活史定義，以因應歐盟提及因為難以辨識鰻苗物種，而提案將鰻鱺屬全數納入附錄管理一事，考量後續係為提供海關、養殖業者、販運商等利害關係人，將會持續完善，並朝向容易閱讀之方式撰擬。
3. 日方再度於本次會議提議，未來科學家會議基於具體科學數據，提供意見予非正式會議，以利作為未來滾動式檢討相關資源管理措施之科學後盾。

(三) 有關日本鰻及其他鰻現況：

1. 本年度受到鰻鱺屬可能被提案列入附錄管理之壓力(歐盟已於 6 月 27 日正式提案)，並考量 CITES 提案及決議之方式，為了減緩附錄管理對東亞鰻魚產業之衝擊，有必要透過本次會議進行研商，除了將由四國共同撰擬聯合聲明，做為遊說其他 CITES 締約國反對提案之說帖，仍應進一步考量被列入附錄管理之因對措施。
2. 此外，日方將會於歐盟正式提案後，依據提案內容及 FAO 專家諮詢小組之評估報告進行聯合聲明之修改，以納入更多科學相關證據，向歐盟說明日本鰻資源不符合納入附錄管理之標準。
3. 針對鰻鱺屬被納入附錄管理之情況，明年第 19 屆鰻魚國際非正式會議將會針對 NDF 及 LAF 進一步討論，為了能於會中取得具體進展，我國有必要加快鰻苗溯源管理之推動，並及早開始進行 NDF 評估之作業。

(四) 建立具法律約束力的國際管理組織：

4. 日本在會前提供並在會中簡要說明現行國際上有多樣的跨國或跨域漁業管理組織，在資源管理的角度上各國代表一致認為，建立具法律約束力的國際漁業管理組織對於鰻魚資源的管理具有重要意義，有助於促進各國之間的合作及提升管理措施執

行的一致性及適應性管理的有效性，這是無庸置疑的。該議題納入本次會議議程討論，主要是藉由四國會議對於日本鰻資源管理有進一步規劃與構想做成紀錄，供日方在後續 CITES 相關會議場合作為說帖，讓國際瞭解四國決心盡可能不讓日本鰻走上歐洲鰻的後塵。

5. 然在政治層面上此議題的討論亦須格外小心，有鑒於過去在第 8 次非正式會議場合退席抗議之不快歷歷在目，雖然近期會議中方係由科學家出席，並未與我國於此議題進一步討論參與方式，且日方對於我國及中國微妙關係處理上十分謹慎，但對於涉及領土、地位等議題，仍然要謹慎審視相關文件及資料。

二、臺灣鰻魚資源管理與日後參團之建議：

茲就會議觀察並檢討參與會議之狀況以及會後發展，研擬建議事項如下：

（一）強化日本鰻（鰻苗及成鰻）資源調查與評估等科學研究，及國際科研合作：

1. 考量鰻鱺屬被提案納入附錄二之管理一事，本次科學家會議任務分組於會期外，已透過各國科學家編撰鰻苗型態辨識指引，並通過將會定義鰻魚生活史階段，以協助海關因應鰻魚於幼體階段之辨識困難，為了使辨識指引更加完整，將持續邀集我國相關專家學者加入任務分組。
2. 科學家會議之任務分組為難得集結各方科學家之機會，可透過不同專業，共同為了鰻魚資源永續而努力，因此有必要藉由此機會，深化各國之科學家合作，針對鰻魚洄游路徑、資源狀況等進行研究，以利掌握更多強而有力之科學數據，滾動式檢討各國相關鰻魚資源養護之管理措施，同時向外界展現四國之決心，同時我國也重視鰻魚資源調查評估工作，同時鼓勵更多科學家參與科學家任務分組，透過任務分組之會期外活動進行科

學交流。

3. 由於現行尚無鰻魚之無危害證明評估標準，且須由各國自行針對期國內鰻魚資源評估是否得以核發出口相關證明文件，為了及早因應鰻魚可能被列入附錄管理，我國已規劃無危害證明初步評估之科研計畫，為了使評估達到正面結果，刻正規劃由捕撈業者自行申報鰻苗捕撈量，以掌握我國鰻苗捕撈及來游狀況。

（二）持續建立完善的鰻魚（苗）漁獲透明度溯源體系：

本次會議除持續關注鰻魚走私貿易的狀況，各國在鰻苗捕撈管理制度日益強化，顯示前端源頭管理之重要性，如日本從原日本鰻特別捕撈許可證轉為具強制力的都道府縣府知事許可證制度，將於本年度 12 月推行水產流通適正化法，針對國內貿易之鰻苗要求檢附合法取得證明，以有效針對鰻魚流通進行管控，並促使日本業者建立漁獲交易紀錄，以及提供準確的漁獲捕撈量數據；中國各省分推動鰻苗捕撈許可證限額制度，亦附加捕撈規模、漁具漁法之限制；我方亦刻正研議鰻苗溯源制度，並於本次會議說明規劃，期許四方共同推動並串接，以追溯鰻苗國際流通狀況，有助於因應未來國際貿易管理之趨勢。

（三）持續關注並小心應對建立具法律約束力之國際/區域性管理組織議題：

應及早邀集委託熟知海洋法公約與國際漁業管理組織運作之專家學者，就組織架構、如何運作及各國應如何合作之細節等進行研析，以尋覓我國最佳權益地位之國際組織參與模式，並在國際會議上持續參與討論並適時提出反饋，以維護我國權益。

（四）後續參團成員組成應持續由產、官、學代表共同組團出席：

鑒於國際對於鰻魚資源養護與管理日益重視，且明年度會

議亦循本年度 2 場會議接續召開模式，且討論議題與各國與會人員涉及層面廣泛，為能在會場上與會外能有效率地交流意見與應對，及回國後縮短與產業溝通之障礙，有必要由產、官、學代表共同組團出席。

(五) 引進日本大型雌性鰻技術，應用於我國養鰻產業：

本次出國期間於會外時間參訪濱松市濱名湖養魚漁業協同組合及濱名湖鰻魚漁業生產組合水野竜先生，除了瞭解該地區對於產業推動之自主性以外，更瞭解濱松地區與時俱進之養殖觀念，與過往追求土用丑日出貨不同，考量到雌性鰻的肉質較為軟嫩，透過於飼料中加入大豆異黃酮方式，使池中鰻魚雌性佔大多數，即使養至1.5P，仍然可以保持4P之軟嫩口感(經過試吃肉質柔軟，魚皮酥脆，較無魚刺口感，且油脂豐富)。

鑒於我國鰻魚屬多年養殖，且主要出貨高峰除了日本土用丑日外，即是土用丑日後清池至隔年放養收成之間隔，為了避免我國鰻魚因為多年養殖，容易使鰻魚皮厚、肉質硬、魚刺口感明顯，透過引進雌性鰻技術，可解決大型鰻魚口感不佳之問題。此外因為雌性鰻體型較大，可提供多份鰻魚販，也可因應近年鰻魚資源減少，造成鰻魚價高供貨不穩之情形。

經瞭解我國財團法人台灣區鰻魚發展基金會葉信明董事長已與我國稚鰻養成業者合作，進行雌性鰻技術之試驗，期盼後續得以推行至我國養鰻產業。

(六) 因應歐盟於 2025 年 CITES 第 20 屆締約國大會提案將鰻鱺屬納入附錄二管理：

查歐盟已於2025年6月27日完成提案，日方業針對歐盟提案內容及FAO專家諮詢小組報告修正「致CITES第20屆締約國大會聯合聲明(草案)」，刻正請中國、韓國及我國進行審視，以

及提供棲地復育及資源增裕措施，作為聯合聲明附件，以向其他國家展現四國對於鰻魚資源養護之成果，遊說其他國家不要支持該項提案。

伍、第4次科學家會議照片



陸、第 18 屆鰻魚國際非正式會議照片



柒、第 4 次科學家會議及第 18 屆鰻魚國際非正式會議文件及參考資料

附件 1 第 4 次科學家會議職權範圍(Terms of Reference)

SM04 Doc.01

Terms of Reference for the Scientific Meeting of Japanese Eel and Other Relevant Eels

The Bureau of Fisheries of People's Republic of China, the Fisheries Agency of Japan, the Ministry of Oceans and Fisheries of the Republic of Korea and the Fisheries Agency of Chinese Taipei (hereinafter referred to as "Members"),

Recalling the Joint Statement of the Bureau of Fisheries of People's Republic of China, the Fisheries Agency of Japan, the Ministry of Oceans and Fisheries of the Republic of Korea and the Fisheries Agency of Chinese Taipei on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species, which was issued in September 2014;

Recognizing the Joint Press Release of the Fourteenth Meeting of the Informal Consultation on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species (hereinafter referred to as "Informal Consultation"), which was released in July 2021;

Have decided the following:

1. The purpose of the Scientific Meeting of Japanese Eel and Other Relevant Eels is to:

- (a) provide a forum for scientific consultation and cooperation on the Japanese eel and other relevant eels among Members;
- (b) promote and collaborate on scientific research;
- (c) share scientific knowledge and experience; and
- (d) provide scientific advice for conservation and management measures to the Informal Consultation.

2. The functions of the Scientific Meeting are to:

- (a) collect, analyze and exchange relevant scientific knowledge and experience, including eel statistics submitted by members to the Informal Consultation, on the Japanese eels and other relevant eels.
- (b) establish an effective mechanism for international cooperation to encourage and promote scientific activities that can contribute to the conservation of the Japanese eel and other relevant eels;
- (c) develop and implement a research plan for scientific activities and

- collaborative research on the Japanese eel and other relevant eels;
- (d) endeavor to conduct a stock assessment of the Japanese eel to identify appropriate measures for its conservation and management;
 - (e) provide scientific advice on conservation and management measures for the Japanese eel and other relevant eels; and
 - (f) prepare a report for consideration and endorsement by the Informal Consultation; and
 - (g) consider any other matters requested by the Informal Consultation.

附件 2 第 4 次科學家會議議程草案

SM04 Doc.03 rev1

(Draft)

The Fourth Scientific Meeting on Japanese Eel and Other Relevant Eels

Venue: Hamamatsu, Japan
June 16-17, 2025

Annotated agenda

June 16 Monday
10:30–17:20 JST

- 1. Opening of the meeting** (SM04 Doc.04) [20 min]
 - The Chair will welcome the participants and open the 4th meeting of Scientific meeting.
 - A delegate from Japan as the host country will deliver a short opening statement.
 - The interim Secretariat (Secretariat) will introduce the participants list instead of their self-introductions.
- 2. Meeting arrangement** [5 min]
 - The Secretariat will explain meeting arrangements.
- 3. Adoption of agenda** (SM04 Doc.02 and 03) [5 min]
 - The Chair will recall that a draft agenda was developed by the Secretariat in consultation with the Chair and Vice Chair and circulated to the Participants on March 0, 2025.
 - The meeting will be invited to adopt its meeting agenda.
- 4. Overview of Japanese eel catch and scientific activities** [90 min]
 - 4.1 Presentation by China (SM04 Doc.07)
 - 4.2 Presentation by Japan (SM04 Doc.08)
 - 4.3 Presentations by Republic of Korea (SM04 Doc.09)
 - 4.4 Presentations by Chinese Taipei (SM04 Doc.10)
 - Each Member will present an overview of Japanese eel catch and scientific activities in their region. (15 min presentation + 5 min Q&A)

Lunch break [90 min]

14:00–17:20 JST

- 5. Discussion on the Japanese eel and other relevant eels at the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)** [60 min] (SM04 Doc.11)
 - 5.1 Basic information of the CITES
 - Japan will make a presentation on the basic information of the CITES.

5.2 Thirty-third meeting of the Animals Committee and seventy-eighth meeting of the Standing Committee

- Japan will make a presentation on the recent discussions on the Japanese eel and other relevant eels at the CITES.
- Participants will be invited to exchange views and information on Japan's presentation.

5.3 Listing proposal of *Anguilla* spp. (eels) to CITES Appendix II for CoP20

- Japan will make a presentation on consideration of listing proposal of *Anguilla* spp. (eels) to Appendix II for CITES CoP20 by EU.
- Participants will be invited to exchange views and information on Japan's presentation.

5.4 Export procedure, including Legal Acquisition Findings (LAF) and Non Detriment Findings (NDF)

- Japan will make a presentation on export procedure in accordance with CITES, including LAF and NDF.
- Participants will be invited to exchange views and information on Japan's presentation.

5.5 Other matters

6. **Report of the intersessional activities [40 min] (SM04 Doc.12)**

- 6.1 Task Team 1
6.2 Task Team 2

- Each task team leader will report the results of the intersessional activities based on the interim report. (10 min for each)
- Participants will be invited to discuss and identify the gaps to be filled and possible next steps.

Coffee break [20min]

7. **Emerging Science and practical solutions in the management of Japanese eel resource in the Northeast Asian region [80 min]**

- 7.1 A review of adaptive management methods based on population dynamics models:
Towards management of farmed glass eel (SM04 Doc.13)

Prof. Hiroshi Hakoyama, Nagano University, Japan

- 7.2 Migratory life cycle of *Anguilla anguilla* : a mirror symmetry with *A. japonica* (SM04 Doc.14)

Prof. Yu-San Han, National Taiwan University, Chinese Taipei

- 7.3 Eel recruitment patterns across New Zealand at hydroelectric stations (SM04 Doc.15)

Shannan Crow, PhD, National Institute of Water and Atmospheric Research, New Zealand

- 7.4 Habitat use history of eels on their spawning migration and its latitudinal cline in Japan (SM04 Doc.16)

Nobuto Fukuda, PhD, National Research Institute of Fisheries Science

Kazuki Yokouchi, PhD, National Research Institute of Fisheries Science

- Each presenter will have 15 minutes for their presentation and 5 minutes for Q&A.
- Participants will be invited to discuss how the emerging scientific knowledge and techniques can be used to improve the scientific assessment and conservation and management measures for the Japanese eel stock in the Northeast Asian region.

June 17, Tuesday
10:00 – 12:00 (JST)

8. Scientific advice for conservation and management measures for the Japanese eel and other relevant eels [60 min]

8.1 Species identification guideline for glass eel (SM04 Doc.17)

- *The Secretariat and Prof. Hakoyama will introduce a draft species identification guideline for glass eels.*
- *Participants will be invited to exchange their views and discuss the draft guideline and future process.*

8.2 Definitions for the different eel life stages (SM04 Doc.18 and Doc.19)

- *The Secretariat will introduce the trade term code of *A. Anguilla* in the guidelines for the preparation and submission of CITES annual reports.*
- *Dr. Fukuda will introduce a brief summary of “evaluation of the pigmentation stages and body proportions from the glass eel”.*
- *Participants will be invited to discuss the definitions for the different eel life stages of the Japanese eel and future process.*

8.3 Initial input of glass eels and eel fries into aquaculture ponds (SM04 Doc.13)

- *The Secretariat will introduce the upper limit of the initial input of glass eels and eel fries into aquaculture ponds and reported input.*
- *Participants will be invited to review and discuss the upper limit of the initial input of glass eels and eel fries into aquaculture ponds.*

8.4 Other matters

Participants will be invited to discuss other matters on scientific advice, if any.

9. Revised workplan of scientific activities/collaboration in 2025-2026 (SM04 Doc.20 and 21) [30min]

- *The task team leaders will introduce the draft workplan of scientific activities/collaboration based on the discussion in the previous agenda items.*
- *Participants will be invited to discuss and revise the workplan.*

10. Date and venue of the next Scientific Meeting [15 min]

- *Participants will be invited to discuss the date and the venue of the 5th Scientific Meeting.*

12. Other matters [15 min]

- *Any other matters not raised in the meeting will be discussed, if proposed.*

Lunch break [120 min]

14:00 – 15:00 JST

11. Adoption of summary report [55 min]

- *Participants will be invited to discuss a draft summary report of the meeting prepared by the Secretariat in consultation with the Chair and Vice Chair for its adoption.*

- 13. Closing of the meeting [5 min]**
- *The Chair will close the meeting.*

附件 3 第 4 次科學家會議出席名單

SM04 Doc.04

The Fourth Scientific Meeting on Japanese Eel and Other Relevant Eels Participants List

【Chair and Vice Chair】

	Category	Title	First name	SURNAME	Position	Organization	participation in the excursion	E-mail
1	Chair	Prof.	Nobuyuki	Yagi	Professor	Tokyo University	☒	yagi@y-ees.u-tokyo.ac.jp
2	Vice Chair	Prof.	Noritaka	Mochioka	Project Professor	Kyushu University	☒	mochioka@agr.kyushu-u.ac.jp

China

	Category	Title	First name	SURNAME	Position	Organization		E-mail
1	Member	Mr.	Xun	ZHOU	Deputy Division Chief	Bureau of Fisheries, Ministry of Agriculture and Rural Affairs, PRC	☐	
2	Member	Mr.	Jianyi	LIU	Professor	East China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences	☒	liujiy@ecsf.ac.cn
3	Member	Mr.	Keji	JIANG	Professor	East China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences	☐	jiangkj@ecsf.ac.cn
4	Member	Mr.	Chao	SONG	Associate Professor	East China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences	☒	songc@ecsf.ac.cn
5	Member	Ms.	Saishuai	LI	Assistant Professor	East China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences	☒	liss@ecsf.ac.cn
6	Member	Mr.	Xuezhou	CHEN	Vice Chairman	China Eel Industrial Association	☒	
7	Member	Mr.	Jiaolin	ZHANG	Vice President	Fujian Tianma Science And Technology Group Co., Ltd.	☒	
8	Member	Ms.	Lu	FANG	Interpreter		☒	fanglumarine@gmail.com

Japan

	Category	Title	First name	SURNAME	Position	Organization		E-mail
1	Member	Prof.	Hiroshi	Hakoyama	Professor	Nagano University	☐	hiroshi-hakoyama@nagano.ac.jp
2	Member	Prof.	Leanne	Faulks	Assistant Professor	Tohoku University	☐	faulks.leanne.kay.a3@tohoku.ac.jp
3	Member	Mr.	Takaaki	Sakamoto	Director of Ecosystem Conservation Office	Fisheries Agency of Japan	☒	takaaki_sakamoto730@mail.go.jp
4	Member	Mr.	Taiki	Ogawa	Assistant Director, Ecosystem Conservation Office	Fisheries Agency of Japan (Co-Secretariat)	☒	yuki_morita750@mail.go.jp
5	Member	Mr.	Kyutaro	Yasumoto	International liaison officer, Ecosystem Conservation Office	Fisheries Agency of Japan	☒	kyutaro_yasumoto890@mail.go.jp
6	Member	Mr.	Hiroshi	Tsukamoto	Officer, Ecosystem Conservation Office	Fisheries Agency of Japan (Co-Secretariat)	☒	hiroshi_tsukamoto810@mail.go.jp
7	Member	Mr.	Takumi	Amano	Officer, Inland Waters/Fishery Promotion Office	Fisheries Agency of Japan	☒	takumi_amano730@mail.go.jp
8	Observer	Mr.	Akihiro	Mae	Director	Global Guardian Trust (Co-Secretariat)	☒	mae@gt.or.jp
9	Observer	Dr.	Iwao	Fuji	Sustainable Society Design Unit	Global Guardian Trust (Co-Secretariat)	☒	fuji-iwao@janus.co.jp
10	Member	Dr.	Nobuto	Fukuda	Senior Research Scientist, Coastal and Inland Fisheries Ecosystems Division	Japan Fisheries Research and Education Agency	☒	fukuda_nobuto630@fra.go.jp
11	Member	Dr.	Kazuki	Yokouchi	Group Head, Socio-Ecological Systems Division	Japan Fisheries Research and Education Agency	☒	yokouchi_kazuki56@fra.go.jp
12	Member	Dr.	Huynh Quang	Thien	Postdoctoral Researcher	Nagano University	☒	huythien@nagano.ac.jp
13	Member	Dr.	Takeru	Kodama	Postdoctoral Researcher	Nagano University	☒	takeru-kodama@nagano.ac.jp
14	Observer	Mr.	Hideki	Yoshitomi	Secretariat	All Japan Association for Sustainable Eel Aquaculture Incorporated	☒	yoshitomi@ainagi-nichimainren.or.jp
15	Observer	Mr.	Junpei	Izuno	Secretariat	All Japan Association for Sustainable Eel Aquaculture Incorporated	☒	izuno@ainagi-nichimainren.or.jp
16	Observer	Dr.	Satoshi	Watanabe	Director, Coastal and Inland Fisheries Ecosystems Division	Japan Fisheries Research and Education Agency	☒	watanabe_satoshi73@fra.go.jp
17	Observer	Ms.	Yumi	Okouchi	staff	Japan NUS CO.,LTD (Co-Secretariat)	☐	okochi-y@janus.co.jp

Korea

	Category	Title	First name	SURNAME	Position	Organization		E-mail
1	Member	Mr.	YoungMin	Kim	Senior Deputy Director	Ministry of Oceans and Fisheries	☒	yegon@korea.kr
2	Member	Dr.	KyungMi	Won	Senior Researcher of Aquaculture Research Division	National Institute of Fisheries Science, Ministry of Oceans and Fisheries	☒	kyungmiwon@korea.kr
3	Member	Dr.	Hyeongsu	Kim	Researcher of Aquaculture Research Division	National Institute of Fisheries Science, Ministry of Oceans and Fisheries	☒	kmk2k@korea.kr
4	Member	Dr.	KyungMi	Jung	Researcher of Coastal Water Fisheries Resource Research Division	National Institute of Fisheries Science, Ministry of Oceans and Fisheries	☒	kyungmjung@korea.kr
5	Observer	Mr.	Eun Young	Baek	Team Leader	KOREA MARITIME INSTITUTE	☒	eflkm@kmi.re.kr
6	Observer	MS.	Mimi	Park	Senior Researcher	KOREA MARITIME INSTITUTE	☒	mmg4214@kmi.re.kr

Chinese Taipei

	Category	Title	First name	SURNAME	Position	Organizaiton		E-mail
1	Member	Dr.	YuSan	Han	Professor&Director, Institute of Fisheries Science	National Taiwan University	☒	yshan@ntu.edu.tw
2	Member	Dr.	ChingHsien	Ho	Associate Professor	National Kaohsiung University of Science and Technology	☒	CCHO@nku.edu.tw
3	Member	Ms.	YouHua	Cheng	Section Chief, Aquaculture Fisheries Assistance section	Fisheries Agency	☒	youthua@msl.fa.gov.tw
4	Member	Ms.	WenHsin	Liu	Associate Specialist, Aquaculture Fisheries Assistance section	Fisheries Agency	☒	wenhsin0225@msl.fa.gov.tw
5	Member	Mr.	WeiHsiang	Chang	Section chief, Resource Management section	Fisheries Agency	☒	weihsiang@msl.fa.gov.tw
6	Observer	Mr.	HsinMing	YEH	Chairman	Taiwan Eel Farming Industry Development	☒	hmveh@mail.tfrin.gov.tw
7	Observer	Mr.	ChiehFu	Wang	CEO	Taiwan Eel Farming Industry Development	☒	a27075603@hotmail.com
8	Observer	Mr.	Chiachi	Fu	CEO	Overseas Fisheries Development Council of the Republic of China	☒	joseph@ofdc.org.tw

【Invited experts/specialists】

	Category	Title	First name (Middle)	SURNAME	Position	Organizaiton		E-mail
1	Invited expert	Dr.	Shamnan	Crow	Freshwater Fish Ecologist	National Institute of Water and Atmospheric Research Ltd (NIWA)	☒	Shamnan.Crow@niwa.co.nz

附件 4 第 4 次科學家會議議事基本規則

SM04 Doc.05

Basic Rules of Meeting Procedure for the Scientific Meeting

The rules were adopted in November 2021 as the Rules of Procedure for the Scientific Meeting on Japanese Eel and Other Relevant Eels.

Meeting language

Rule 1

The working language of the scientific meeting shall be English. Meeting documents shall be submitted to the meeting in English.

Meeting format

Rule 2

The meeting may be held face to face/online, considering various situations.

Meeting participants

Rule 3

1. Each Member country/region of the Informal Consultation on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species (Informal Consultation) has their entitlement to appoint scientists, researchers, experts/specialists, and government officials to participate in the meeting as **“Members”**.
2. Japanese eel fisher, Japanese eel farmers, other relevant industry people, members of Alliance for Sustainable Eel Aquaculture” (ASEA), NGOs and other organizations authorized by each Member country/region may be allowed to participate in the meeting as **“Observers”**.
3. Each Member country/region may be accompanied by their interpreters in the meeting.
4. The meeting may invite scientists/researchers/specialists on other relevant eels to the meeting as **“Invited experts/specialists”**.

Officers and Secretariat

Rule 4

1. The meeting shall elect its Chair and Vice-Chair/Co-Chair.
2. The Chair/Co-Chair shall preside in the meeting to adopt a meeting agenda and facilitate endorsement of a summary report prepared by an interim Secretariat.

3. The Vice-Chair shall assist the Chair in his/her functions and shall act on his/her behalf at meetings in the absence of the Chair.
4. A Member country/region that hosts the meeting shall service and act as an interim Secretariat for the meeting.

Arrangement of the meeting

Rule 5

1. The meeting shall be called at the request of the Chair/Co-Chair or of a simple majority of the Members.
2. The time and place of the meeting shall be determined by the Chair/Co-Chair and the interim Secretariat, in consultation with the Members and in accordance with any instructions provided by the Informal Consultation.
3. Notice of the meeting shall normally be given by the interim Secretariat at least 90 days in advance of the meeting. In case of emergency meetings, notice should be given at least 45 days in advance of the meeting.

Rules of order and debate

Rule 6

1. All participants (Members, Observers, Invited experts/specialists, Interpreters) shall be allowed to speak in the meeting in accordance with the Chair's/Co-Chair's presidency.
2. The Chair/Co-Chair shall, as a general rule, call upon speakers in the order "Members", "Invited experts/specialists" and "Observers" in which they signify their desire to speak and shall give an order of precedence to the participants of the meeting.
3. However, the Chair/Co-Chair may depart from this general rule and call on speakers in the order that he/she judges appropriate to ensure the timely progress of the debate.
4. The meeting shall take decisions by consensus.

Working groups

Rule 7

1. The meeting may establish such in-session and intersessional working groups as may be necessary for the meeting to carry out its purposes. Intersessional working groups shall normally work electronically unless the meeting or the Informal Consultation have determined otherwise.
2. For each working group, the meeting or the Informal Consultation shall define the terms of reference.
3. The membership of each working group shall be limited to the Members and to those observer bodies and organizations with expertise on the meeting purpose invited by the meeting to join the working group.

4. Subject to resource constraints, the interim Secretariat shall provide support and guidance to intersessional working groups.
5. Insofar as they are applicable, these Rules shall apply mutatis mutandis to the proceedings of working groups.

Summary report

Rule 8

A concise summary report of the decisions of the meeting shall be prepared by the interim Secretariat for endorsement by the meeting before the closure of the meeting or after the meeting electronically.

Final Provisions

Rule 9

1. Matters not covered by the Basic Rules may be treated in consultation with the Members and in accordance with the Chair's/Co-Chair's presidency.
2. The Basic Rules shall be occasionally reviewed, according to circumstances.

附件 5 第 4 次科學家會議文件列表

(Attachment II)

List of Meeting Documents

Document Number	Document Title
SM04 Doc.1	Terms of Reference for the Scientific Meeting of Japanese Eel and Other Relevant Eels
SM04 Doc.2 rev1	Meeting agenda of the 4 th scientific meeting on Japanese eel and other relevant eels
SM04 Doc.3 rev1	Annotated agenda of the 4 th scientific meeting on Japanese eel and other relevant eels
SM04 Doc.4	Participant list
SM04 Doc.5	Basic rules of meeting procedure for the scientific meeting
SM04 Doc.6	Information note for participants
SM04 Doc.7	Presentation by China
SM04 Doc.8	The Overview of Japanese Eel catch and scientific activities (Japan)
SM04 Doc.9	Presentations by Republic of Korea
SM04 Doc.10	Presentations by Chinese Taipei
SM04 Doc.11	Discussion on the Japanese eel and other relevant eels at the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
SM04 Doc.12	Minutes of the Eel Task Teams Workshop in 2025
SM04 Doc.13	A review of adaptive management methods based on population dynamics models: Towards management of farmed glass eel
SM04 Doc.14	Migratory life cycle of <i>Anguilla anguilla</i> : a mirror symmetry with <i>A. japonica</i>
SM04 Doc.15	Eel recruitment patterns at hydroelectric stations across New Zealand
SM04 Doc.16	Habitat use history of eels on their spawning migration and its latitudinal cline in Japan
SM04 Doc.17	Guidelines for the morphological identification of glass eels endemic to Asia and Oceania
SM04 Doc.18	Guidelines for the preparation and submission of CITES Annual reports
SM04 Doc.19	Evaluation of the pigmentation stages and body proportions from the glass eel to yellow eel in <i>Anguilla japonica</i>

SM04 Doc.20	Draft updated workplan for scientific activities and collaborative research on Japanese eel and other relevant eels (2025-26)
SM04 Doc.21	Draft updated Terms of Reference for Task Team 1 & 2 of Scientific Activities and Collaborative Research on Japanese Eel Established under the Scientific Meeting
SM04 Inf.01	Summary report of the 3 rd scientific meeting on Japanese eel and other relevant eels
SM04 Inf.02	Summary report of the 17 th meeting of informal consultation on international cooperation for conservation and management of Japanese eel stock and other relevant eel species
SM04 Inf.03	Joint statement of the bureau of fisheries of People's Republic of China, the Fisheries Agency of Japan, the Ministry of Oceans and Fisheries of the Republic of Korea and the Fisheries Agency of Chinese Taipei on international cooperation for conservation and management of Japanese eel stock and other relevant eel species
SM04 Inf.04	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES-AC33 Summary Report)
SM04 Inf.05	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES-AC33 Doc. 40)
SM04 Inf.06	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES-SC78 Summary Report)
SM04 Inf.07	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES-SC78 Doc.69.1 and Doc. 69.2)
SM04 Inf.08	Draft Resolution on Trade, Conservation and Management of Anguillid Eel Species (<i>Anguilla spp.</i>)
SM04 Inf.09	Conf. 18.7 (Rev. CoP19) Legal Acquisition Findings
SM04 Inf.10	Conf. 16.7 (Rev. CoP17) Non-detrimental findings
SM04 Inf.11	CITES NDF Guidance
SM04 Inf.12	Japan's draft NDF for the Japanese eel (<i>Anguilla japonica</i>)
SM04 Inf.13	Confidence Interval for Extinction Risk Revisiting the Misconception that the Interval is Too Imprecise to Be Useful

附件 4 中國大陸日本鰻捕撈及科學活動概況分享



SM04 Doc,07

The Fourth Scientific Meeting on Japanese Eel and Other Relevant Eels,
Hamamatsu, Japan, June 16–17, 2025

SM04/Doc.07: Status of Industry and Scientific Research of Japanese Eel in China

SONG Chao

East China Sea Fisheries Research Institute, Chinese Academy of Fishery
Sciences, Shanghai, 200090, China

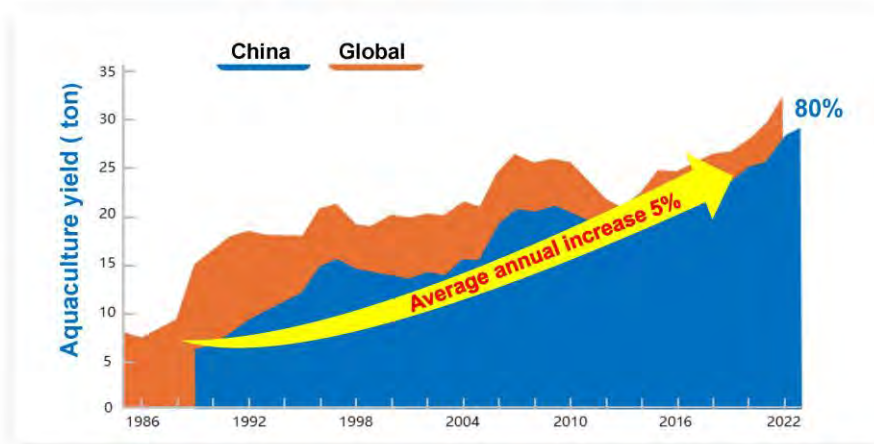
June 16, 2025



1

Industry Situation

Status of Aquaculture Yield in China



Judging from the eel breeding output in China and the world, since 1980s, the eel breeding output in China and the world both shown a fluctuating growth as a whole.

In 2023, the eel breeding output in China exceeded 290,000 tons, accounting for more than 80% of the global aquaculture output, ranking first in the world for 30 consecutive years.

3 / 40

Status of Eel Export in China



Eel export trends in the past three years

From 2021 to 2023, the export of live eel has increased, while the export of roasted eel has decreased.

However, the export of eel is still an important agricultural export target in China, ranking first in the export of bulk agricultural products in China for 12 consecutive years.

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Status of Glass Eel Resources in China



Glass eel have declined by over 70% since the 1980s

As for the resources of eel fry, due to the influence of climate change and overfishing, the natural resources of eel fry have fallen sharply. The fishing yield has been less than one third of that in the 1980s. According to the monitoring, in recent years, there has been a periodic peak value of Japanese eel fry resources every 5-6 years in China, and the overall eel resources have been improved. In order to fully reflect the change of eel fry resources, detailed and systematic scientific monitoring is needed.

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2

Scientific Research

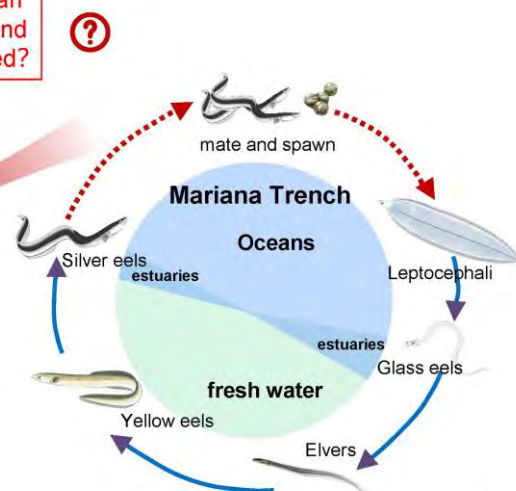
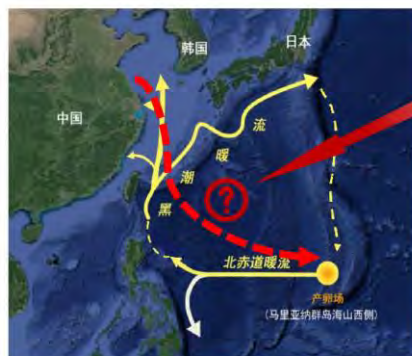
2.1

Study on Eel Resources

Eel Migration Routes

Eels exhibit a complex and mysterious life cycle, with their spawning grounds located in the Mariana Trench - the deepest part of the world's oceans

How the eel reproductive population migrates from the estuary through the ocean to the spawning ground for reproduction, and its migration path and time are still unsolved?



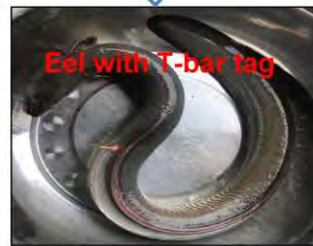
8 / 40

Eel Tagging Techniques

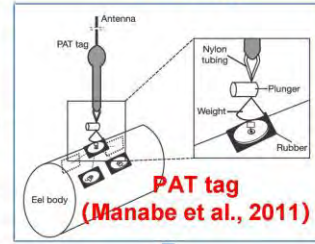
Tagging & Tracking



T-bar



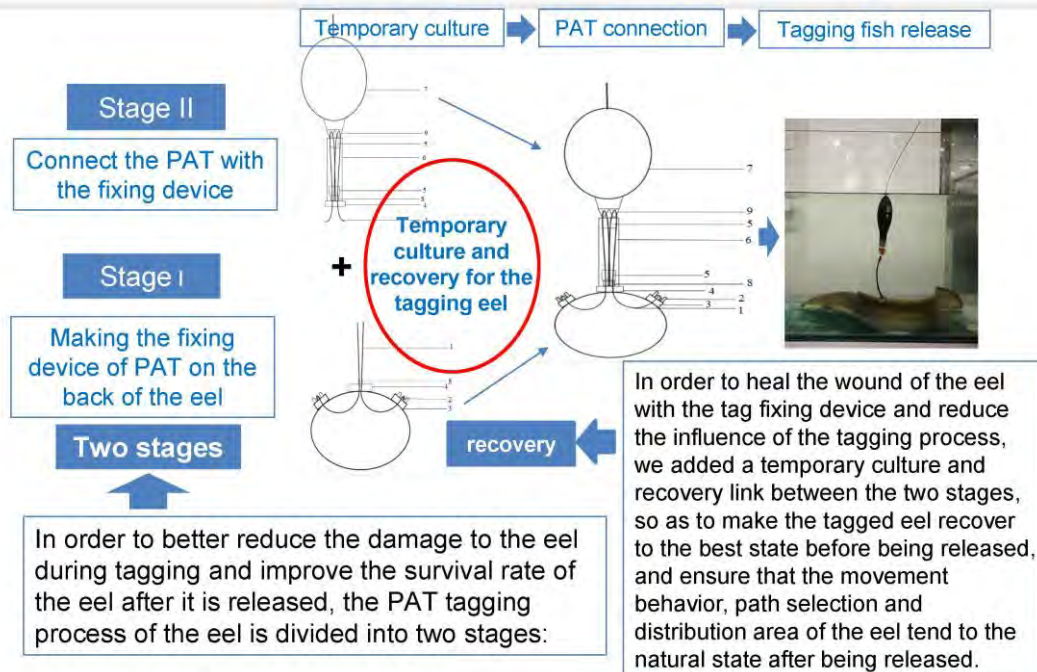
PAT tag



In order to find out the migration path and distribution area of eels after entering the sea from the estuary, we used two eel tagging methods, as T-bar tag and PAT tag, to tag and track the wild and cultured eels.

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PAT Tagging Innovations



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PAT Recovery Information

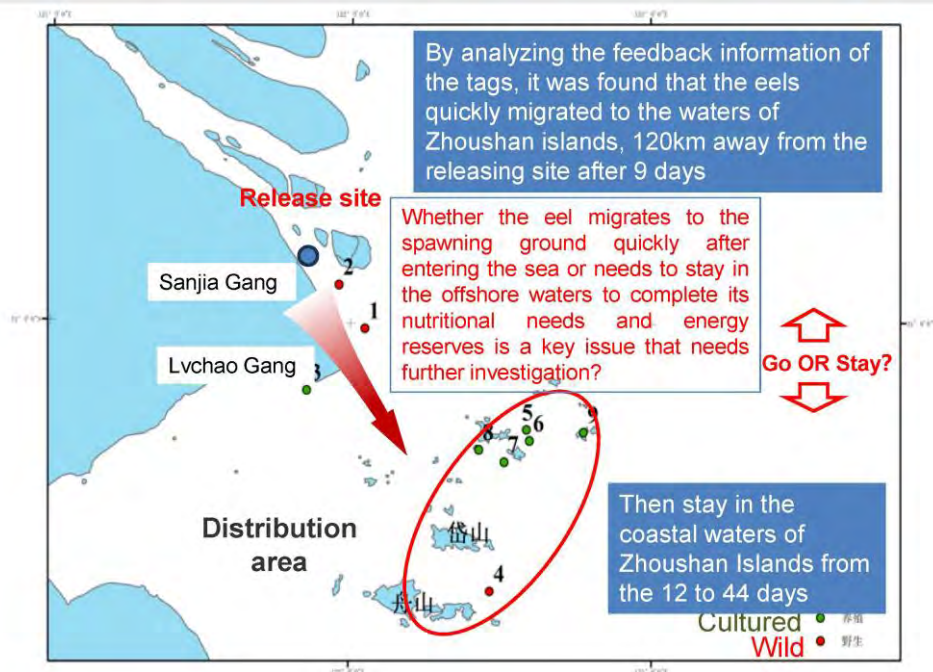
Recovery No.	Tags types	Days between releasing and recovery	Distance to release spot/km	Number(in d.)	Sample source	Recovery spot East longitude(E) North latitude (N)	
1	PAT	2	32.45	1	Wild	122.0474	30.9869
2	PAT	3	18.21	1	Wild	121.9608	31.1001
3	PAT	3	43.08	1	Cultured	121.8556	30.8252
4	PAT	9	117.66	1	Wild	122.4656	30.3070
5	T-bar	12	90.98	1	Cultured	122.5860	30.7257
6	T-bar	12	93.53	1	Cultured	122.5958	30.6975
7	T-bar	14	91.63	2	Cultured	122.5122	30.6425
8	T-bar	23	82.48	2	Cultured	122.4284	30.6744
9	T-bar	44	106.13	4	Cultured	122.7758	30.7197

We tagged 10 eels with PAT tags, including 6 wild eels and 4 cultured eels and tagged 500 T-bar tags.

We recovered 4 PAT and 10 T-bar data, and made statistical analysis on the coordinates of the recovered sites and the distance information from the releasing point.

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Tracking Information of the Released Eels



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Sources of Eel Otolith Samples

Sample Information

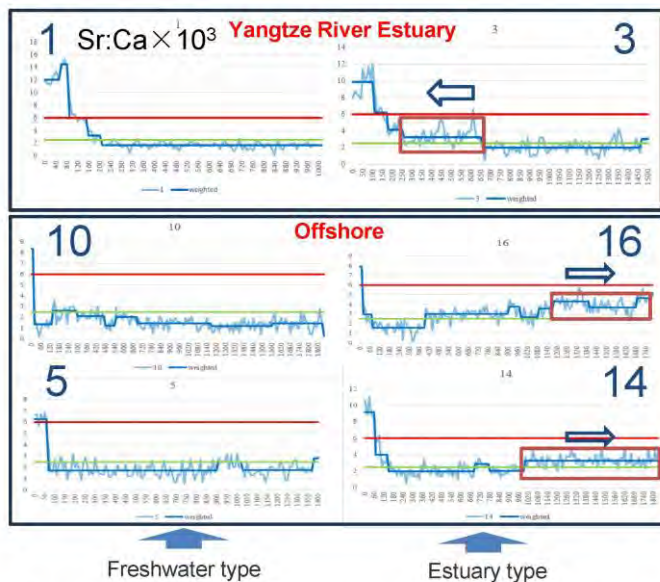
Sampling Area	Sample	Overall Length /mm	Body Length /mm	Weight /g
Yangtze River Estuary	1	463	458	174.99
	3	650	642	415.80
Offshore	10	730	718	700.01
	5	648	638	582.50
	16	765	753	758.60
	14	782	774	1000.10

In order to further explore the habitat history of eel, we collected eel otolith samples from the Yangtze River estuary and offshore, and analyzed their otolith microchemistry.



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Quantitative Line Analysis of Otoliths



1# is a wild eel fry, which is cultivated in fresh water

3# is collected in the Yangtze River estuary, which is mainly distributed in brackish water area in the early stage.

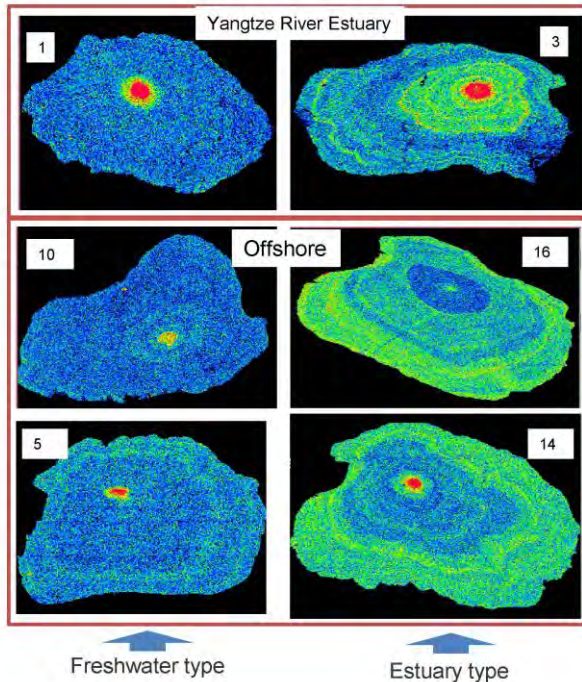
10# and 5# are offshore individuals, and the growth process is mainly in fresh water, which is freshwater utilization type.

16# and 14 are offshore individuals, which are mainly distributed in estuaries before entering the sea, which is brackish water type.

Through the analysis of otolith quantitative line, it is found that both the Yangtze River estuary and the offshore eel show different characteristics of habitat utilization.

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Surface Analysis of Otolith Sr Content



Through the analysis of Sr content surface of otolith, it is shown that the utilization characteristics of estuaries in the Yangtze River estuary and offshore eels are different.

1# briefly passed through the Yangtze River estuary in the early stage and then cultured in fresh water

3# mainly distributed in the Yangtze River estuary in the early stage

10# and 5# briefly passed through the estuary during their growth.

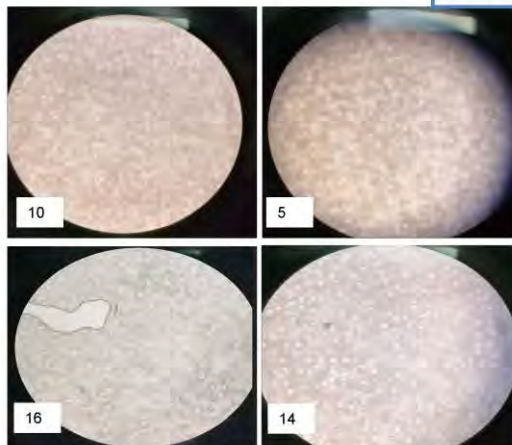
16# and 14 # mainly distributed in the estuary before entering the sea.

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Habitat utilization & gonad development

Sample source	Migration pattern	Sample size	Sample No.	Habitat utilization type	Habitat utilization time	GSI
Yangtze Estuary	S-B-F	1	1	Freshwater	80.20	0
	S-B-F-B	1	3	Estuary	40.40	0
Offshore	S-B-F	2	10/5	Freshwater	95.29/90.07	1.1/2.56
	S-B-F-B	2	16/14	Estuary	73.74/51.09	1.8/2.30

Through the corresponding analysis of individuals with different habitat use types and their gonad development, it is found that those who stay in the estuary for a long time in the same type have relatively good gonad development, which may be related to the need for eels to stay in the estuary for a period of time to obtain food and replenish energy during their migration to the sea.



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Migration Path Study Applied in Resource Conservation

Life History of the Japanese Eel



Through the above research, it is found that the study of eel habitat history plays an important role in resource protection.

Through the research of habitat history, the composition of reproductive groups, habitat distribution, habitat demand, bait sources and energy reserves during migration are found out, which provides technical guidance for the protection of eel migrating into the sea.

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Migration path Study Applied in Artificial Propagation

In addition, the research on the migration history of reproductive groups into the sea also plays an important role in artificial reproduction.

By studying the migration path of eels, we can find out the habitat demand, nutrient intake and energy reserve in the migration process, so as to guide the breeding and management of backup parent fish in artificial breeding.

In the breeding of artificial parent fish, we can simulate and create the habitat factors required for eel breeding, and cultivate high-quality parents through multi-factor coordinated regulation.



18 / 40

2.2 Study on Eel Artificial Propagation

Future Research Direction of Artificial Reproduction

(1) Ecological characteristics of eel breeding behavior

Explaining the breeding process of eel and its specialized ecological conditions

(2) Basic theoretical biology research of eel breeding

Clarify gonadal development initiation factors and their regulatory mechanisms

(3) Cultivation techniques of high-quality parents of eel

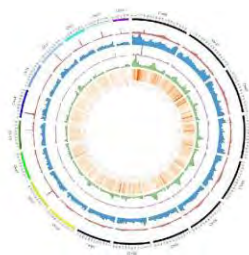
Innovating parental gonadal ripening regulation and dynamic monitoring technology to cultivate high-quality parents

The ecological data of eel spawning grounds were obtained

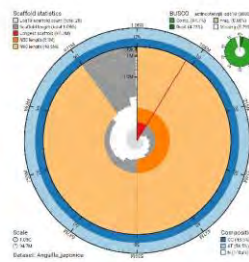
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CTDO1113.gz	WinRAR 压缩文件	28,189 KB
CTDO1114.gz	WinRAR 压缩文件	14,320 KB
GLDO1114.gz	WinRAR 压缩文件	434 KB
MBTO1113.gz	WinRAR 压缩文件	697 KB
MBTO1114.gz	WinRAR 压缩文件	741 KB
OSDO1113	文件	8,225 KB
OSDO1113.gz	WinRAR 压缩文件	1,854 KB
OSDO1114.gz	WinRAR 压缩文件	641 KB
PFO1113.gz	WinRAR 压缩文件	66,374 KB
PFO1114.gz	WinRAR 压缩文件	29,461 KB
SURF_ALL	文件	15,602 KB
SURF_ALL.gz	WinRAR 压缩文件	3,291 KB
SURF_ALL1114.gz	WinRAR 压缩文件	3,291 KB
XBTO1113.gz	WinRAR 压缩文件	23,754 KB
XBTO1114.gz	WinRAR 压缩文件	27,724 KB

The NOAA marine survey data near the spawning ground of eel in Mariana Trench was collected and sorted out, including: CTD, XCTD, XBT, PFL, and OSD.

Completion of fine mapping of eel genome



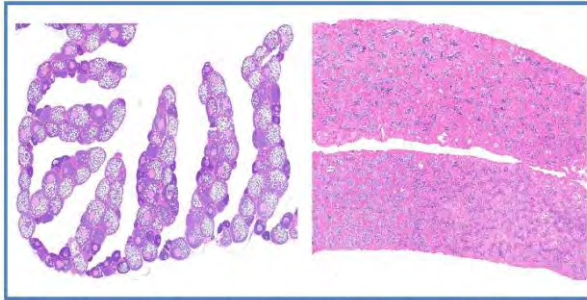
Genome details circos map



Basic genomic information statistical fossa chart

Completed the fine mapping of the eel genome at the near T2T (telomere to telomere) level in females and males, which lays an important foundation for the precise analysis of functional genes related to sex determination, gonadal development and early development of the eel.

Study on gonadal development and its regulatory mechanism



Staining results of sectioned gonads of male and female reserve parents of eel

Tissue samples of female and male backup parents of eel were collected, DNA and RNA were extracted, and the expression patterns of genes related to gonadal development regulation were analyzed.



Experimental system for spectral selection preference of eel

A spectral behavioral research device was developed, and the eel's preference and adaptability to a specific spectrum were analyzed, which provided a reference for the subsequent reproductive regulation research.

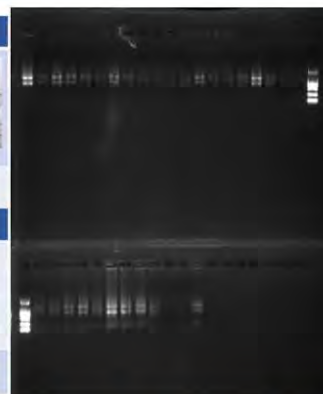
Breeding of eel back-up parents on a large scale



Completed the construction of a large-scale breeding base for back-up parents, examined their gonadal development status.

Morphological observation of embryonic development and analysis of RNA expression

观察时间	2.5 hpf	3.5 hpf	6.5 hpf	9 hpf	18.5 hpf
图片					
发育时期	16细胞期	多细胞期	囊胚期	原肠期	胚体形成期
观察时间	20.5 hpf	23 hpf	27.5 hpf	30.5 hpf	34 hpf
图片					
发育时期	视囊形成期	体节形成期	脑泡形成期	肌肉效应期	初孵仔鱼



The early developmental process of the embryos were observed.

The RNA of the embryos was extracted and used for transcriptome sequencing to analyze the gene expression of the embryos in different developmental periods.

Thank you for your attention



SM04 Doc.08

SM04/Doc08: The Overview of Japanese Eel catch and scientific activities (Japan)

The 4th Scientific Meeting on Japanese Eel and Other Relevant Eels, Mita Kaigisho, Tokyo, Japan, June 16–17, 2025

Hiroshi Hakoyama

June 16, 2025

hiroshi-hakoyama@nagano.ac.jp

Institute of Freshwater Biology, Nagano University

1/19

Overview of Japanese eel catch data and glass eel survey in Japan

Overview of catch data

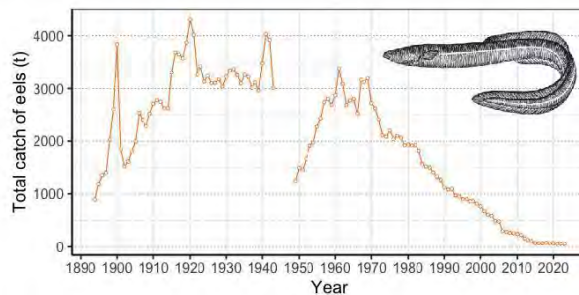
In Japan, long-term annual catch time series of Japanese eel since 1894 (about 130 years) have been recorded by prefecture and river, by inland and coastal waters, and by yellow eel and seedling (glass eel and elver) (Hakoyama et al., 2016).

Investigation of the arrival of glass eel

As information that does not rely on fisheries, a survey of glass eel arrivals has been conducted since 2019 in five prefectures in Japan in order to determine the status of glass eel arrivals in months outside of the fishing season (December through April).

2/19

Yellow eel catch (total catch) in Japan



Data are based on the fisheries statistics of the Government of Japan (Hakoyama et al., 2016, The Annual Report of Catch Statistics on Fishery and Aquaculture in 2023). After World War II, only catches in inland waters were counted.

3/19

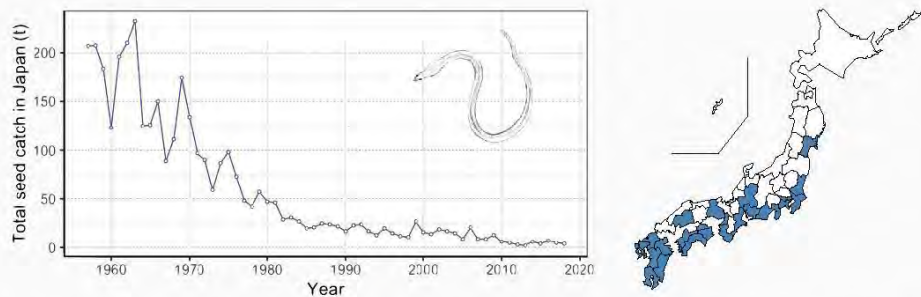
Inland and coastal yellow eel catches by prefecture in 1941, just after World War II (gray: inland, black: coastal)



- In the past, when populations were relatively 'healthy', yellow eel catches in inland waters were twice as large as in coastal waters
- The absence of official eel catch statistics for coastal areas in recent years may suggest that coastal stocks have declined more
- Suggests that inland water populations and environments are inherently more important

4/19

Total seed catch (including glass eels and elver eels) in the sea and inland waters in Japan



Data from fisheries statistics of the Government of Japan (Hakoyama et al., 2016, The Annual Report of Catch Statistics on Fishery and Aquaculture in 2018).

5/19

Recent regulations for glass eel in Japan

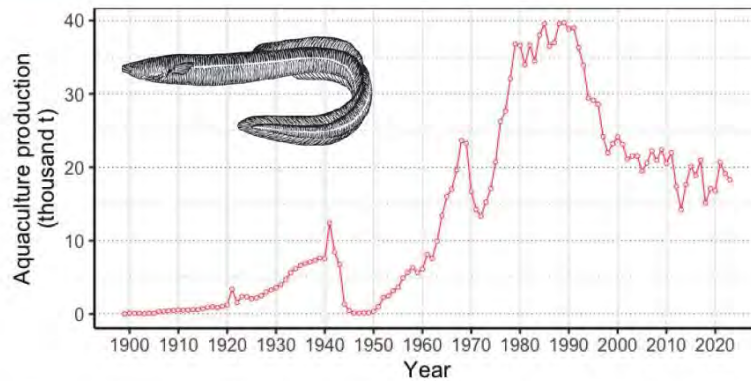
Starting from December 2023, glass eels were officially designated as “specified aquatic animals and plants”. Along with that, penalties for illegal activities were strengthened. As a result, the old special catch permit system was abolished, and now fishing for glass eels requires a license from the prefectural governor.

Also, back in December 2022, Japan enforced a new law called the Act on Ensuring the Proper Domestic Distribution and Importation of Specified Aquatic Animals and Plants. Under this law, it became mandatory for businesses that harvest or deal with glass eels to register their business information, report their catch numbers, and keep transaction records.

At the same time though, at least seven prefectures have removed their glass eel catch limits, and the national government stopped publishing official glass eel catch data back in 2018.

6/19

Aquacultural production of eels in Japan



Data are based on the fisheries statistics of the Government of Japan: The Statistical Yearbook of Ministry of Agriculture and Forestry and the Annual Report of Catch Statistics on Fishery and Aquaculture in 2023.

7/19

A research project on population dynamics and fisheries management of Japanese eel

The project

- The Fisheries Agency of Japan started the project from 2019
- 38 institutes in Japan (4 universities, FRA, several prefectural governments) join the project
- Nagano University is the core institute of the project

Scientific administrative contributions required for this project

- Extinction risk assessment
- Understanding and predicting eel resource trends
- Appropriate management measures for pond input and catch quantity

8/19

3 groups in the research project

- **Group 1:** Resource evaluation and management: resource trend analysis, pond input recommendations, and extinction risk assessment
- **Group 2:** Population genetic analysis such as effective population size estimation
- **Group 3:** Tracking spawning migration of Japanese eels by Pop-up Satellite Tags

Possible Collaboration

The themes of Group 1 (especially, **glass eel monitoring** and **yellow and silver eels sex-ratio**) and Group 3 (**satellite tag survey**) seem appropriate for international joint research on Japanese eel and relevant eels.

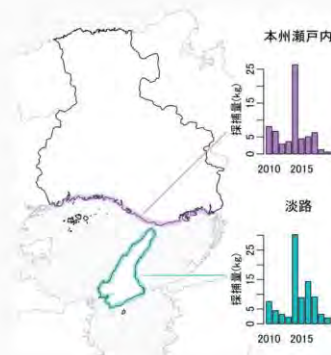
9/19

Efforts by researchers to work with prefectural government to develop detailed catch data

- Efforts to develop more detailed data on glass eel from 2019
- Compilation of coastal yellow eel catch data not available in official statistics

Detailed data items on glass eel by prefecture (not fully supported yet)

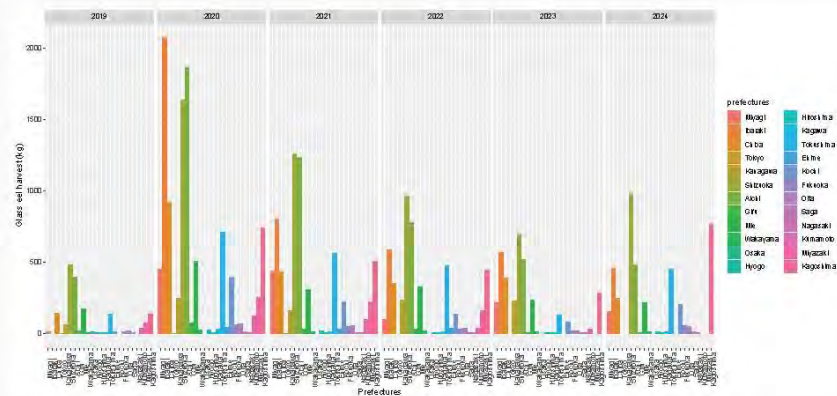
- Amount of eels caught by month and season
- Permit to catch (number of cases, number of people, quantity)
- Effort (number of units, number of days in operation)
- Information on fishing gears and methods



10/19

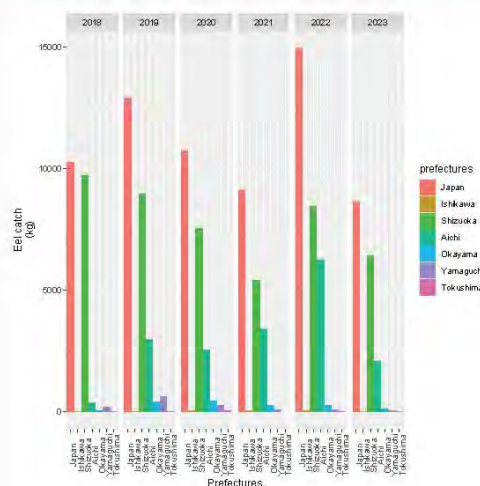
Glass eel catch by prefecture for fiscal years from FY2019 to FY2024

Fiscal year 2024 (FY2024, 2023.12-2024.4 fishing season) is more than FY2018, but may be on a declining trend after FY2019.



11/19

Yellow eel catch in coastal fisheries from 2018 to 2023



- Yellow eel fisheries off the coast of Japan are limited to 6 prefectures
- Unlike the glass eels, there does not appear to be a downward trend in catch over the past five years

12/19

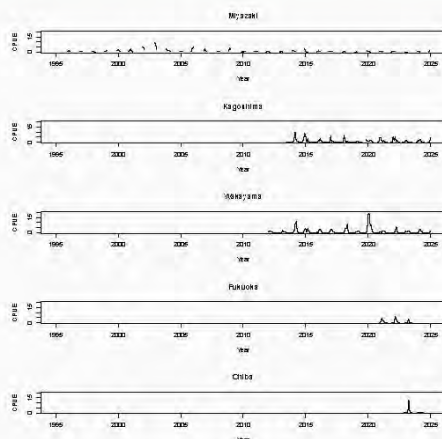
Monitoring the arrival of glass eels at 6 sites in Japan



- We have been conducting annual local surveys at 5 sites in Japan since fiscal year 2019 (2019-2020 fishing season) with one additional site (Ishigaki) added in FY2024.
- These surveys will provide information on non-fishery-specific Japanese eel stock trends, including information outside of the fishing season
- Survey items: CPUE, glass eel length and weight, developmental stages by chromatophore, and physical environment such as salinity and temperature

13/19

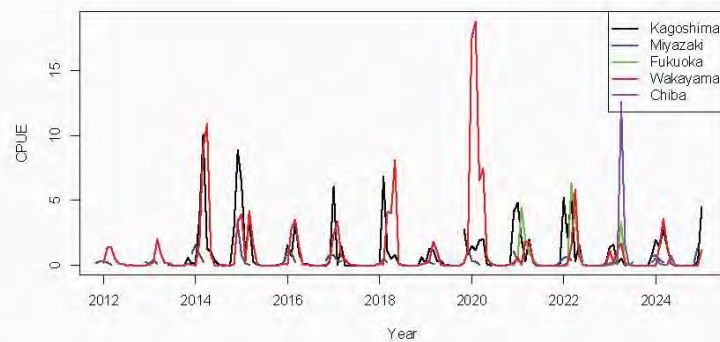
Monthly glass eel CPUE for Miyazaki, Kagoshima, Wakayama and Fukuoka from the survey



The Kagoshima and Wakayama year-round surveys indicate that few glass eels migrate outside of the December through April fishing season.

14/19

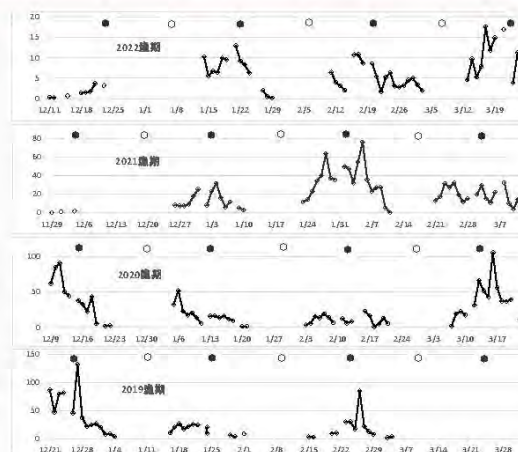
It can be read that the peak of Shirasu eel migration slows from west to east (Kagoshima < Wakayama)



Draw the same data over. The peaks of the black line (Kagoshima) are earlier than the peaks of the red line (Wakayama).

15/19

CPUE of glass eels at intervals of a few days in Miyazaki Prefecture



Black and white circles indicate the age of the moon. Fluctuations in the amount of migration in response to tides can be analyzed. Statistical analysis of time series of multiple glass eel surveys is under consideration.

16/19

Estimating effective population size N_e from genomes: a fishery-independent index of abundance

We also estimate the time series of effective population size from annual genome samples of glass eel as a fishery-independent index of abundance.

Table 1: Effective population size estimates (LD method using SNPs)

Fiscal year	Sample size	N_e	Confidence Intervals
2019	264	23,375	15,008–52,621
2020	714	18,422	12,224–37,001
2021	555	18,829	12,755–35,725
2022	430	20,854	16,156–29,368
2023	716	23,152	19,796–28,476

There has been no significant change in N_e estimates over the past few years.

17/19

Summary

- Japan has accumulated long-term fishing data. There has been a significant long-term decline in catches.
- Over the last 5 years, catch data have shown a decreasing trend for glass eel (not yet statistically confirmed). Survey data for glass eel are also almost consistent with this trend.
- Analysis of fishing data will be shown in a later presentation.

Thank you very much for listening!

18/19

References

Hakoyama, H., Fujimori, H., Okamoto, C. and Kodama, S. (2016). Compilation of Japanese fisheries statistics for the Japanese eel, *Anguilla japonica*, since 1894: a historical dataset for stock assessment, *Ecological research* **31**(2): 153.

附件 6 韓國日本鰻捕撈及科學活動概況分享

The Fourth Scientific Meeting on Japanese Eel and Other Relevant Eels, June 16 2025

Current status of management measures & spatial distribution of *Anguilla japonica* glass eels in Korea river estuaries



National Institute of Fisheries Science
Fisheries Resources Management Division
Kyung-Mi Jung

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- 1** Current status of management measures
- 2** Study on spatial distribution of glass eels in 2025
- 3** Future plans

Anguilla japonica in Korea

Inland catch & Aquaculture production

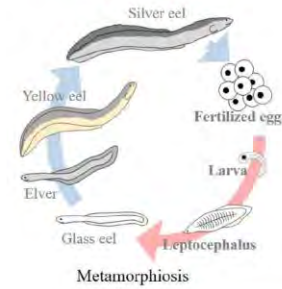


- Inland catch
 - average : 76 tons
 - 2024 : 80 tons
- Aquaculture production
 - average : 9,930 tons
 - 2024 : 15,978 tons

Source: Statistics Korea

- ✓ Catch in inland waters : continuous decline since 2009
- ✓ Aquaculture production : dramatic increase since 2012
 - economically very important species

Life cycle



Modified from Jang et al. 2023

- ✓ Migration from Korea to the ocean
 - glass eel (7-9 months)
 - yellow and silver eel (5-12 years)
 - return to the ocean (~ TL 60cm)

Management Measures in Korea

- INLAND WATER FISHERIES ACT (Article 21-2)
- ENFORCEMENT DECREE OF THE INLAND WATER FISHERIES ACT (Article 17)

✓ Prohibition Period : 1 October ~ 31 March

- time of occurrence of mature silver eels in estuaries
- except reservoirs and lakes isolated from estuaries due to dams

✓ Prohibition Length : total length 15 ~ 45 cm

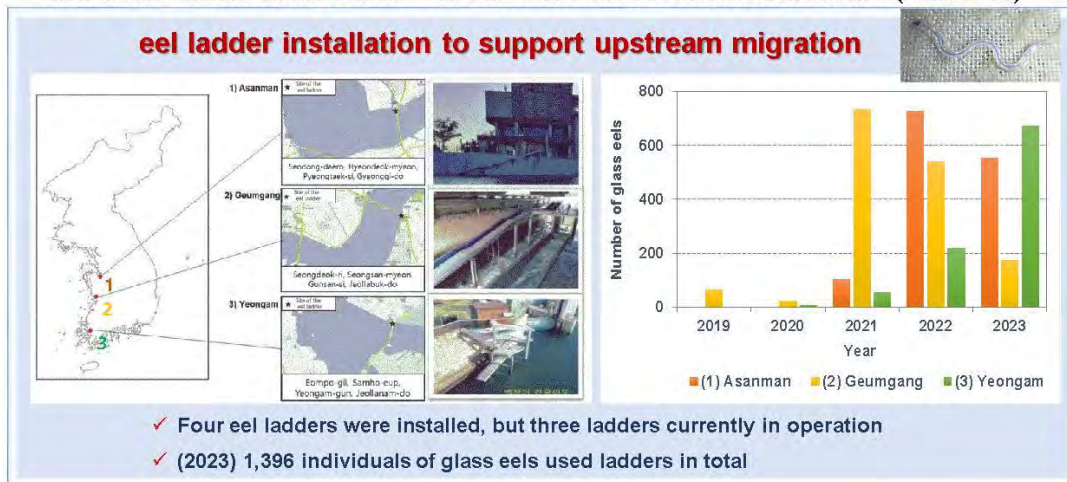
- economically less valuable sizes



Establishment of
fishing ban regulations
(July 2017)

Management Measures in Korea

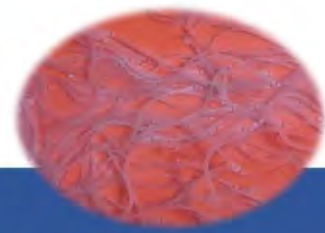
- **INLAND WATER FISHERIES ACT** (Article 19)
- **ENFORCEMENT DECREE OF THE INLAND WATER FISHERIES ACT** (Article 15)



Management Measures in Korea

- **FISHERY RESOURCES MANAGEMENT ACT** (Article 42)
- **ENFORCEMENT DECREE OF THE FISHERY RESOURCES MANAGEMENT ACT** (Article 24)





Study on Spatial Distribution of Glass Eels in 2025

Upstream Migration of Glass eels in Korean Waters



Main Season of upstream

- ✓ Jeju Island : **January** to March
- ✓ Coast of South Sea : **February** to April
- ✓ Mid Coast of West Sea : **March** to May
- ✓ North Coast of West Sea : **April** to June

Statistics of glass eel

- ✓ **Catch of glass eels : No official data !**
→ rely on the information of input of glass eels into the aquaculture farms

Motivation & Study purpose

Growing international movement to list *Anguilla japonica* under Appendix II of CITES



CITES Standing Committee holds critical discussions on conservation of endangered species and examines global wildlife trade regulations

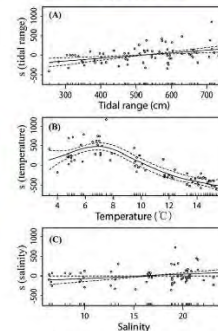
Geneva, 20 February 2025

Considerations for CoP20 on aquatic and tree species
The Committee discussed the Convention's first draft resolution on trade, conservation and management of anguillid eel species, which will be further deliberated on later this year at CoP20 in Uzbekistan.

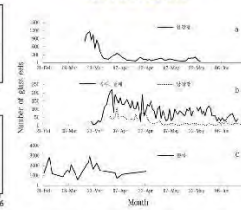


Few studies on glass eels for fisheries management policies

Hwang et al. 2014



NIFS 2014-2015



<Daily catch of glass eels>

<Environmental effects on glass eel catch>

2025 study purpose

- ✓ Understand catch characteristics in the fishing grounds of Korea
- ✓ Estimate seasonal distribution density in three main estuaries for glass eels

Materials and methods

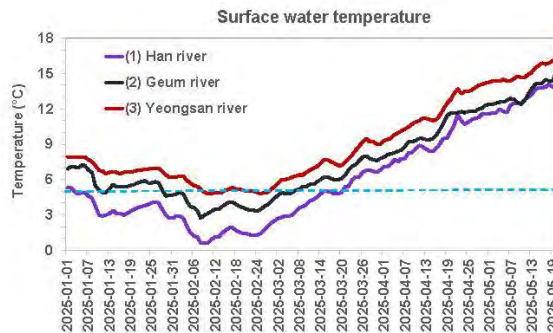
(1) Han river

(2) Geum river

(3) Yeongsan river

- ✓ Study period
: February to June in 2025
- ✓ Study areas
: Han river, Geum river, Yeongsan river
- ✓ Sampling of glass eels
: use of licensed glass eel stownets (three types of fishing gear)
- ✓ Standardization using flow meters
: use of flowmeters → ind./1,000m³

Results – surface water temperature



✓ Temperature from Jan. to May 2025

(1) Han river : 0.6 – 14.1 °C (6.0 °C)

(2) Geum river : 2.7 – 15.2 °C (7.5 °C)

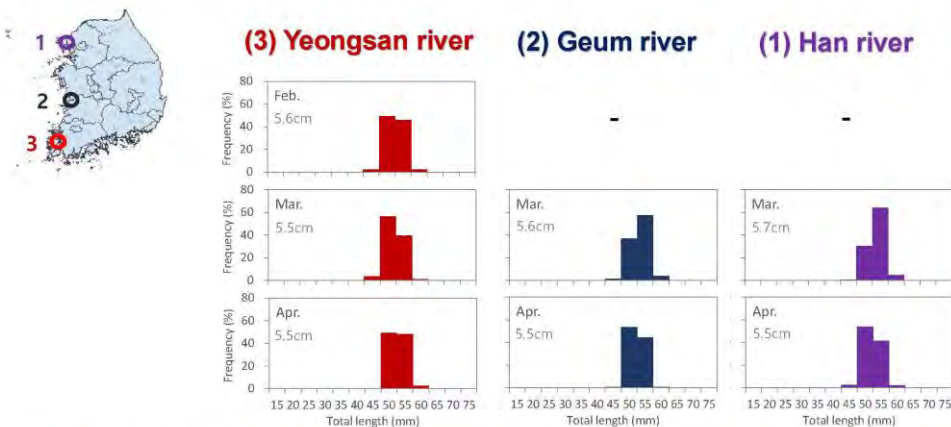
(3) Yeongsan river : 4.8 – 16.3 °C (8.9 °C)

✓ Glass eels begin to appear at a surface water temperature of 5 °C.

- Yeonsan river : Feb. / Geum river and Han river : March



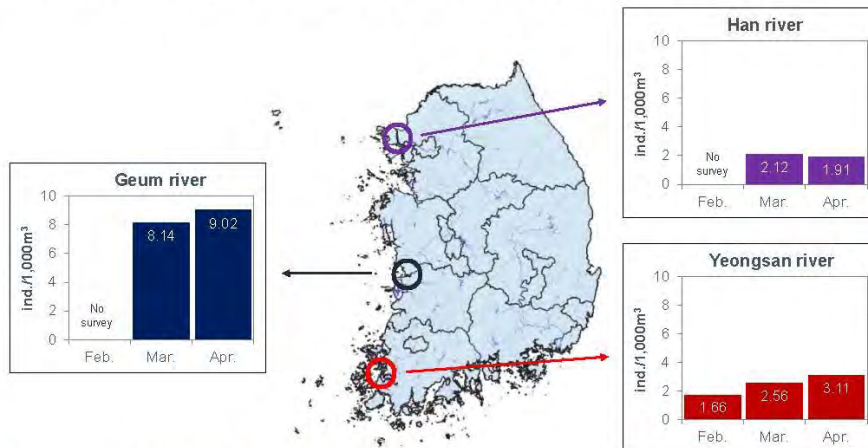
Results – length distribution of glass eels (Feb. – Apr.)



✓ Mean total length of glass eels : 5.5 – 5.7 cm from Feb. to Apr. among the three areas

✓ Eggs spawned at different times during the spawning season and migrate to the coasts

Results – density of glass eels (Feb. – Apr.)



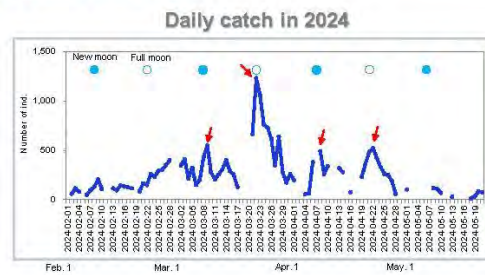
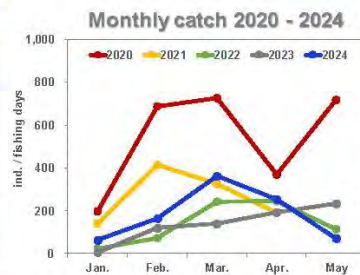
- ✓ Increase of density from Feb. to Apr.
- ✓ Geum river : the highest number of individuals per 1,000m³

Results – daily fishing log of fisherman (Yeongsan river)

Daily fishing log



Variation in glass eel catch



- ✓ Daily fishing log : catch information from 2014 to 2024 on a daily base
- ✓ CPUE (ind. / fishing days) : high record in 2020
- ✓ Peak season of catch in Yeongsan river : generally in March
- ✓ Daily catch (2024) : high during new moon and full moon

Future plans

- 1** Comprehensive analysis with the entire study results
 - ✓ Catch and density variability of glass eels
 - ✓ Relationships with environmental factors (temperature, tidal cycle etc.)
 - ✓ Estimate abundance (density) in three study areas
- 2** Standardization of survey methods
 - ✓ Develop fishing gear optimized for glass eel catch

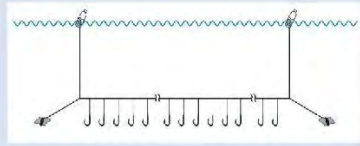
Thank you



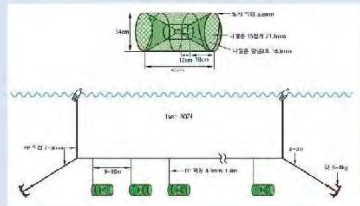
Fishing Gear in Korea

yellow eel & silver eel (river etc.)

Longlines

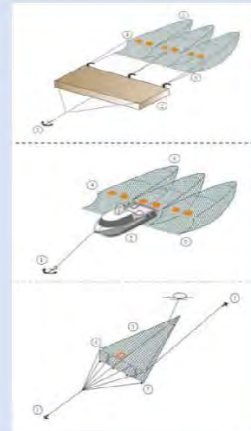


Trap



glass eel (estuary water etc.)

Stownets



SM04 Doc.10

**The 4th Scientific Meeting on Japanese Eel and Other
Relevant Eels, Hamamatsu, Japan, June 16-17, 2025**

**The overview of Japanese eel catch
and scientific activities in Taiwan**

Chinese Taipei

Yu-San Han & Ching-Hsien Ho

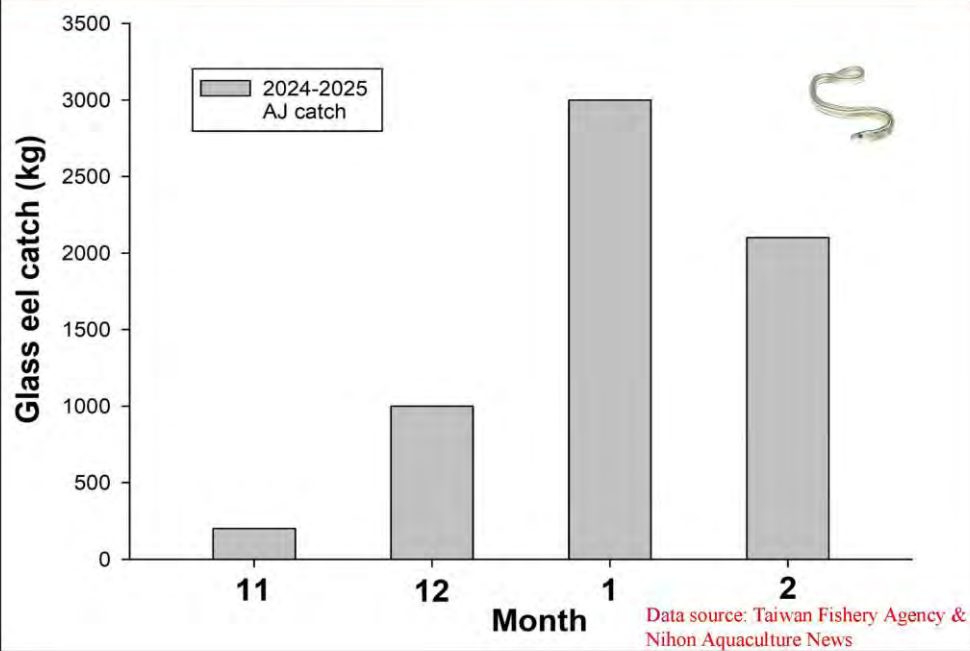
韓玉山 及 侯清賢



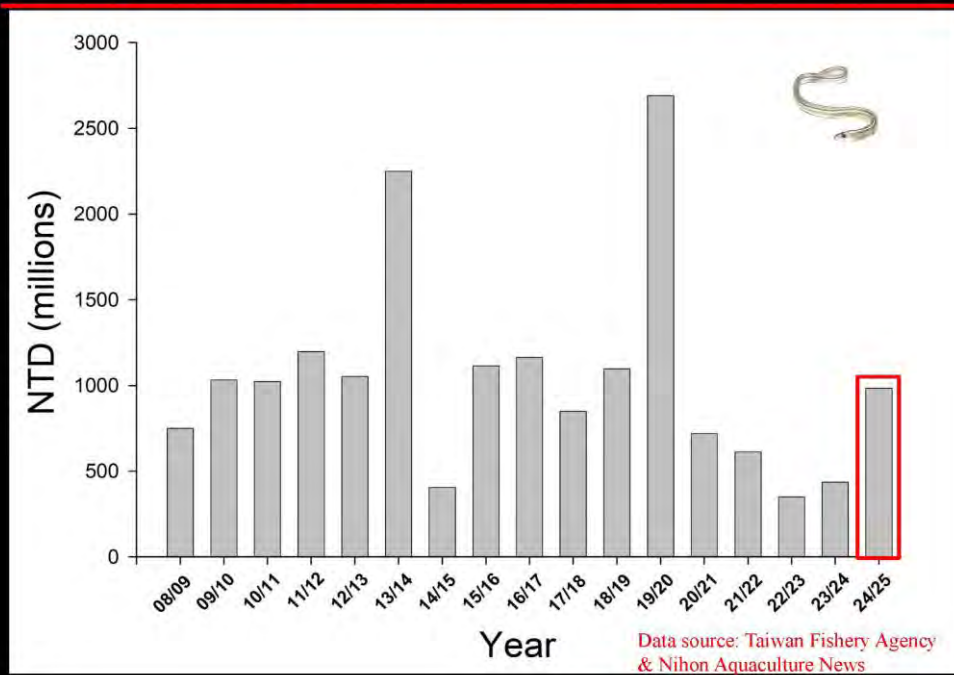
Outlines

- Catch of the Japanese glass eel in Taiwan**
- The scientific activity of the eel research
in Taiwan between 2024-2025**

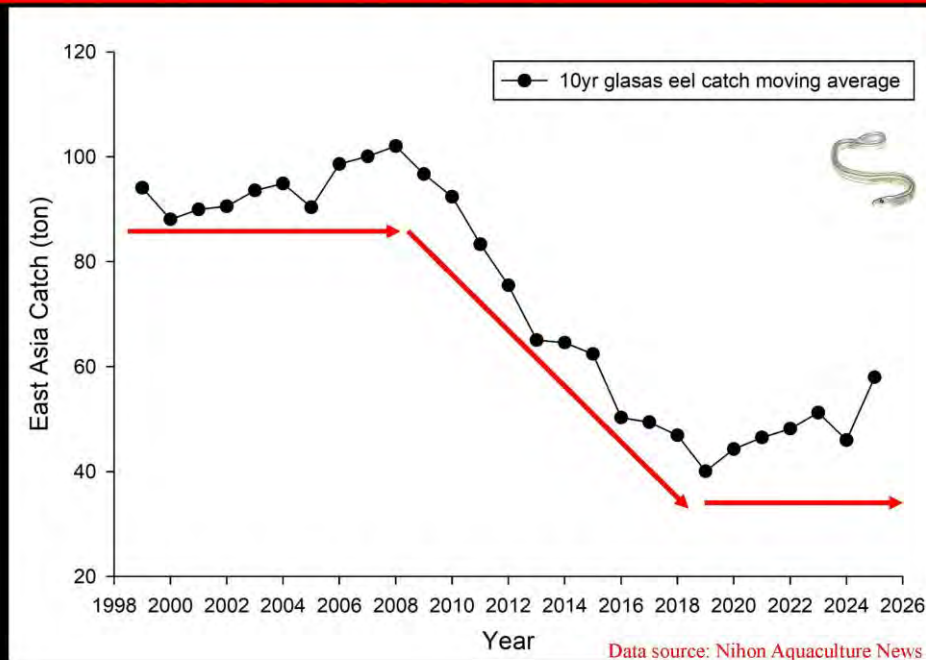
Japanese glass eel catch in Taiwan



Japanese glass eel value in Taiwan



Japanese glass eel catch in East Asia



Outlines

-Catch of the Japanese glass eel in Taiwan

-The scientific activity of the eel research in Taiwan between 2024-2025



Adding 0.5% and 1% of *B. subtilis natto* NTU-18 to the diet is beneficial for Japanese glass eel's immunity, growth performance, and disease resistance to *E. tarda*.

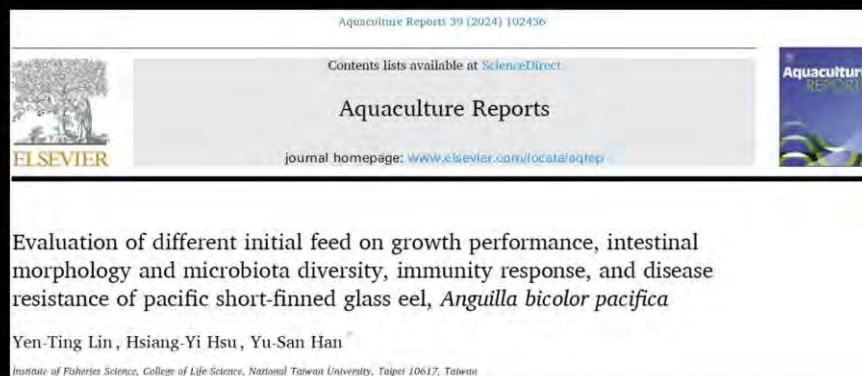


A total of 7 Anguillidae species were found in Taiwan, namely *Anguilla japonica*, *A. marmorata*, *A. bicolor pacifica*, *A. luzonensis*, *A. celebesensis*, *A. interioris*, and *A. borneensis*.

Migratory life cycle of *Anguilla anguilla*: a mirror symmetry with *A. japonica*

Hsiang-Yi Hsu¹ | Kuan-Mei Hsiung² | Yu-San Han¹ 

Japanese eels have one-year migratory cycle, European eels are more likely to have two-year migratory life cycle.



The artificial paste feed made by squid mince, fish roe mince, krill meal, vitamin, and guar gum, is safer and more efficient than bloodworms and eel powder feed for *A. bicolor pacifica* glass eels.

OPEN **Reconstructing the experienced temperature during the larval oceanic migration of anguillid eels from otolith stable oxygen isotopes**

Mari Kuroki^{1,2}, Shunsuke Hayasaka¹, Kozue Nishida^{3,4}, Toyoho Ishimura^{3,5}, Akihiro Okamura⁶, Yoshiaki Yamada⁶, Yu-San Han⁷ & Kotaro Shirai⁸

$\delta^{18}\text{O}_{\text{otolith}}$ provides a reasonable estimation of the experienced water temperature, and *A. marmorata* may exploit shallower and warmer water masses, and grow more rapidly during their oceanic larval period than *A. japonica*.

The Aquamarine Green Biotech Company, Ltd. Successfully finished artificial propagation of the Japanese glass eel in year 2024 in Taiwan



frp sdq |



vshfhp hq



diswr fhskdov

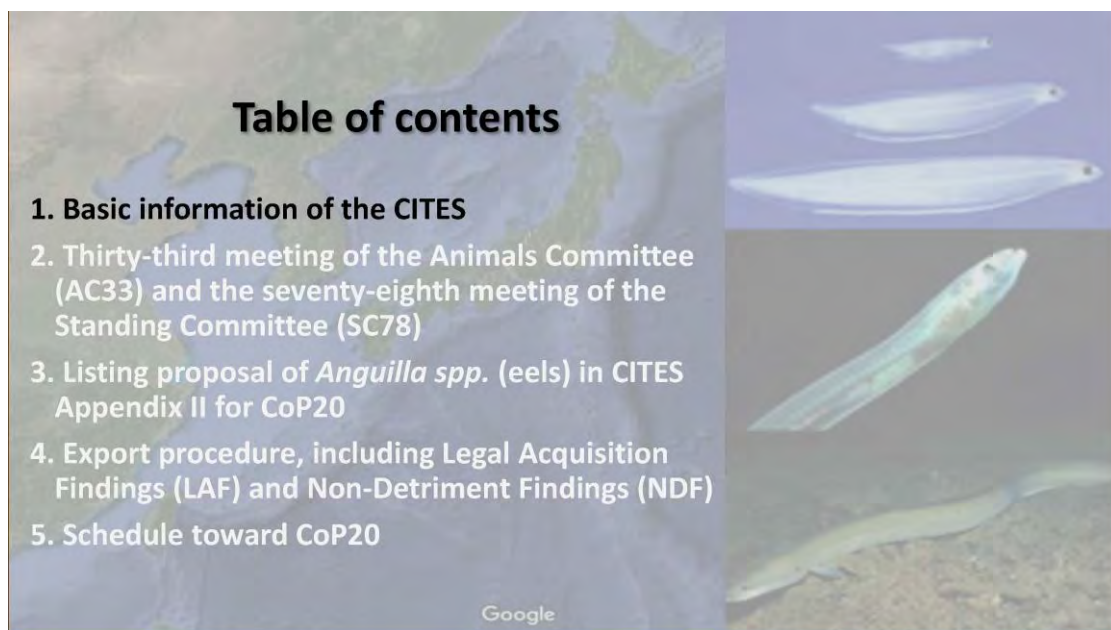


jwlv hho

Thank you

Discussion on the Japanese eel and other relevant eels at the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

Fisheries Agency of Japan
March 2025



(1) What is CITES?

● Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

● Purpose: “Ensure that international trade in specimens of wild animals and plants does not threaten their survival”

- 185 member countries (including EU)
- Conference of the Parties (CoP) : Every 2 or 3 years.
 - CoP 19 : Panama, 14-25 November 2022
 - CoP 20 : Samarkand, Uzbekistan, 24 November -5 December 2025

3

(2) CITES Appendices

- **Appendix I** includes species threatened with extinction which are or may be affected by trade.

⇒Any commercial trades are prohibited.

- **Appendix II** includes species not necessarily threatened with extinction, but whose trade must be strictly regulated in order to avoid utilization incompatible with their survival.

⇒Any commercial trades require an export permit from national CITES authority.

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(3) Export permit in accordance with CITES

An export permit may be issued only if the specimen was **legally obtained** and if the export will **not be detrimental to the survival of the species**.



5

(4) Reservation

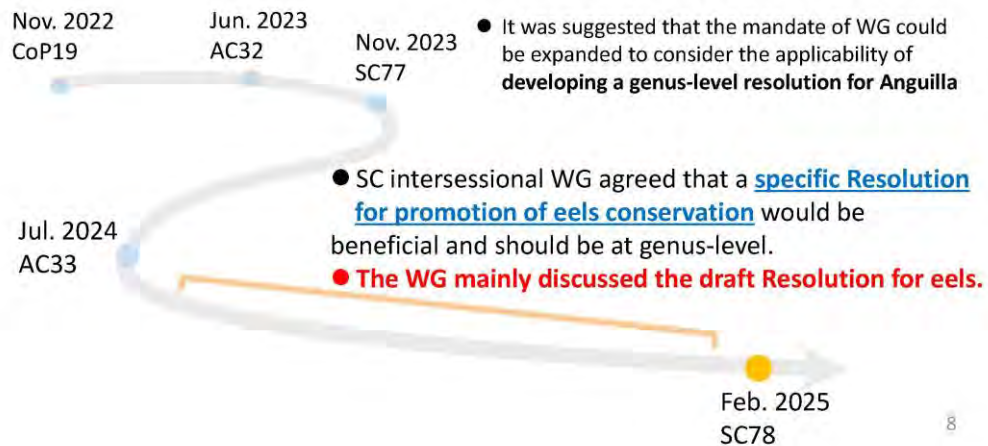
Any State may enter a specific reservation with regard to any species included in Appendix I, II or III.

	If a Party enters reservation...	Species that Japan has entered reservations
Appendix I	The party treat the species as if it were included in Appendix II for all purposes.	Humpback whale, sperm whale etc.,
Appendix II	The party shall be treated as a State not a Party to the CITES .	Shortfin mako, blue shark, oceanic whitetip shark, whale shark, seahorses etc.,

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(1) Intersessional working group on Eels



(2) Discussion in the 78th Meeting of the Standing Committee

3-8 February 2025, Geneva (Switzerland).

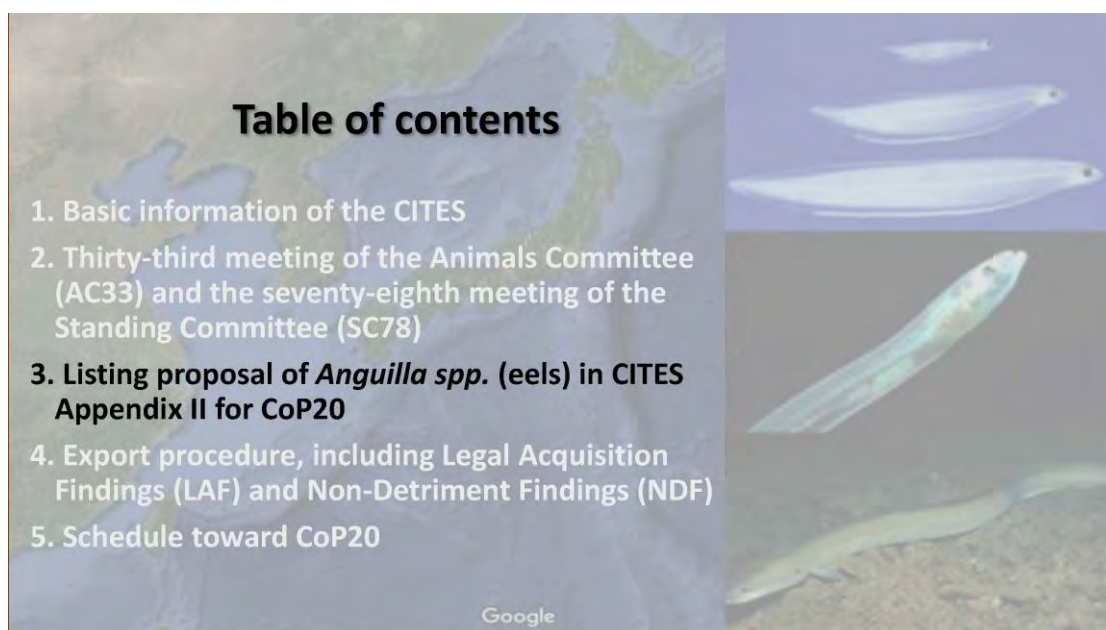
- **The Committee agreed that consensus could not be achieved.**

- The draft resolution on anguillid eel species (Inf 08) with some amendments will be submitted for consideration by the CoP20.

- Some Parties proposed that provisions of the Resolution should distinguish between CITES listed European eel and non-listed eel species as well as the wording "urges" is not appropriate for non-listed species.

- Some Parties expressed the challenges of the implementation of the provisions in the draft Resolution.

9



Consultation with 69 range States of eel species by EU

- The European Commission issued the Note of consultation with 69 range States of eel species for consideration of the **possible listing proposal of *Anguilla* spp. (eels) in CITES Appendix II**



1
1

EU's draft listing proposal of *Anguilla* spp. (eels) in CITES Appendix II for CoP20

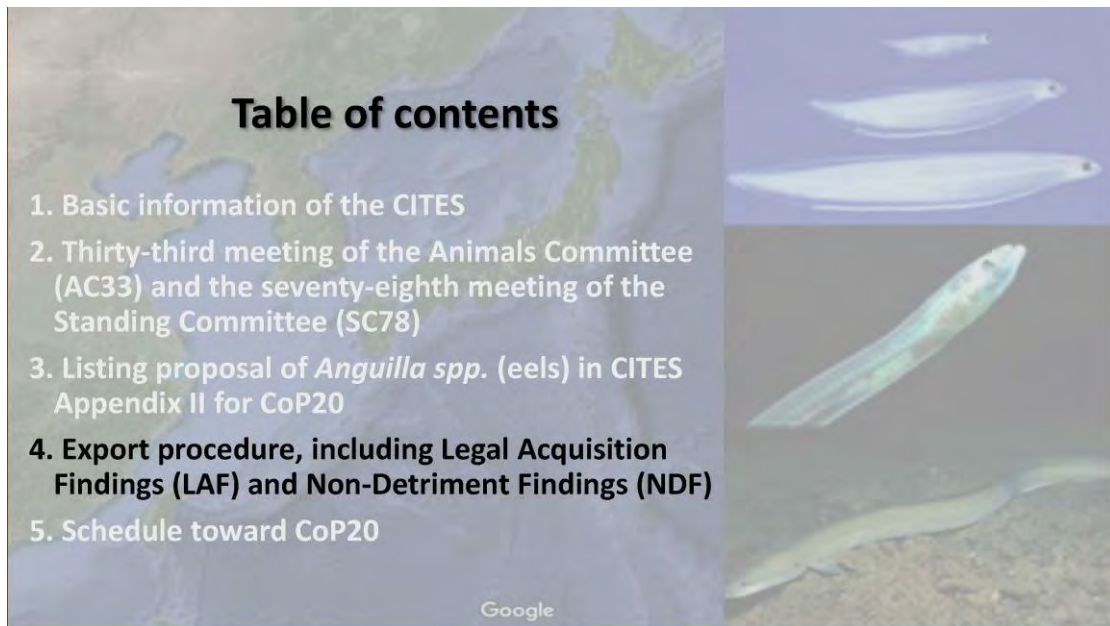
	Common name	Scientific name	proponents	Appendix	Note
1	Freshwater eels	<i>Anguilla</i> spp.	EU	II	Approximately 18 species (except European eel (<i>A. anguilla</i>))



- EU is internally considering submission of a proposal to list *Anguilla* spp. at genus-level in CITES Appendix II.



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(1) Legal acquisition findings (LAF)

- Export permit shall only be granted when a Management Authority of the State of export is satisfied that the specimen was not obtained in contravention of the laws of that State for the protection of fauna and flora.
- The finding that a Management Authority shall make is referred to as a **legal acquisition finding (LAF)**.

Provisions of the Convention

- [Article III paragraph 2 \(b\)](#)
for specimens of Appendix I species
- [Article IV paragraph 2 \(b\)](#)
for specimens of Appendix II species
- [Article V paragraph 2 \(a\)](#)
for specimens of Appendix III species

Resolutions and Decisions

- [Resolution Conf. 18.7 \(Rev. CoP19\)](#) on Legal Acquisition Findings
- [Rapid Guide for the making of legal acquisition findings](#)

Other Resolutions and Decisions referring to or providing guidelines on legal acquisition findings:

- [Decisions 19.128 to 19.131](#) on Legal acquisition findings
- [Decisions 19.222-227](#) on Sharks and rays (*Elasmobranchii spp.*)
- [Resolution Conf. 14.6 \(Rev. CoP16\)](#) Introduction from the sea
- [Resolution Conf. 12.3 \(Rev. CoP19\)](#) Permits and certificates
- [Resolution Conf. 11.3 \(Rev. CoP19\)](#) Compliance and enforcement

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(2) Practical steps for the verification of legal acquisition

To verify legal acquisition, the Management Authority should ;

Review all the documentary and information presented by the applicant.

- The documentation should, to the extent practicable, provide information on the entire **chain of custody** back to the source of the specimen.
- Such information may include following records;
 - a. demonstrating that the specimen was removed from the wild in accordance with relevant laws (licenses, collections permits, etc. etc.),
 - b. identifying the specific specimen (band numbers or other marks, etc.),
 - c. documenting the history of transfers of ownership (sales, receipts, invoices, etc.)
 - d. showing that the specimen was reared at a particular facility.

If a Management Authority is satisfied that the specimen was legally acquired from all relevant information, the requirement of verification of legal acquisition is fulfilled.

(3) Non-detriment findings (NDF)

- Export permits for specimens of species included in Appendices I and II shall be granted only when a Scientific Authority of the State of export has advised that such export will not be detrimental to the survival of the species.
- The following determination is known as a **non-detriment finding (NDF)**.

Provisions of the Convention

- [Article III paragraph 2 \(b\) and 3 \(a\)](#) for specimens of Appendix I species
- [Article IV paragraph 2 \(b\)](#) for specimens of Appendix II species
- [Article III paragraph 5 \(a\) and VI paragraph 6 \(a\)](#) for specimens of introduction from the sea

Resolutions and Decisions

- [Resolution Conf. 10.3](#) on Designation and role of the Scientific Authorities
- [Resolution Conf. 16.7 \(Rev. CoP17\)](#) Non-detriment findings
- [Resolution Conf. 13.2 \(Rev. CoP14\)](#) Sustainable use of biodiversity: Addis Ababa Principles and Guidelines
- [Resolution Conf. 14.7 \(Rev. CoP15\)](#) Management of nationally established export quotas
- [Decisions 19.132 - 19.134](#) Non-detriment findings

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CITES NDF guidance

- [Module 1](#) Principles and concepts of NDFs
- [Module 2](#) Practical considerations for making NDFs
- [Module 5](#) NDFs for aquatic species

(4) Practical steps for non-detriment findings

Parties or non-Parties may refer the following materials for NDF;

Resolution Conf. 16.7 (Rev. CoP17) Non-detriment findings

- Concept and non-binding guiding principles for NDF, including assessment methodology (species biology and life-history characteristics, population structure, status and trends, population monitoring, management measures etc.

CITES NDF guidance

- In the CITES NDF project, Parties, observers and independent experts developed a non-binding NDF guidance.

(5) Japan's draft NDF for the Japanese eel

Outline of Japan's draft NDF (SM04 Inf.12)

Based on NDF Guidelines for Aquatic Species by the Fisheries Agency of Japan ([link](#)), NDF for the Japanese eels is applicable thanks to;

- Sufficiently large effective population size (N_e): approx. 20,000 individuals, stable since 2019
- Glass eel catch is within average catch in the past (3.7-17.1t)
- National-wide continuous resource enhancement projects including followings.

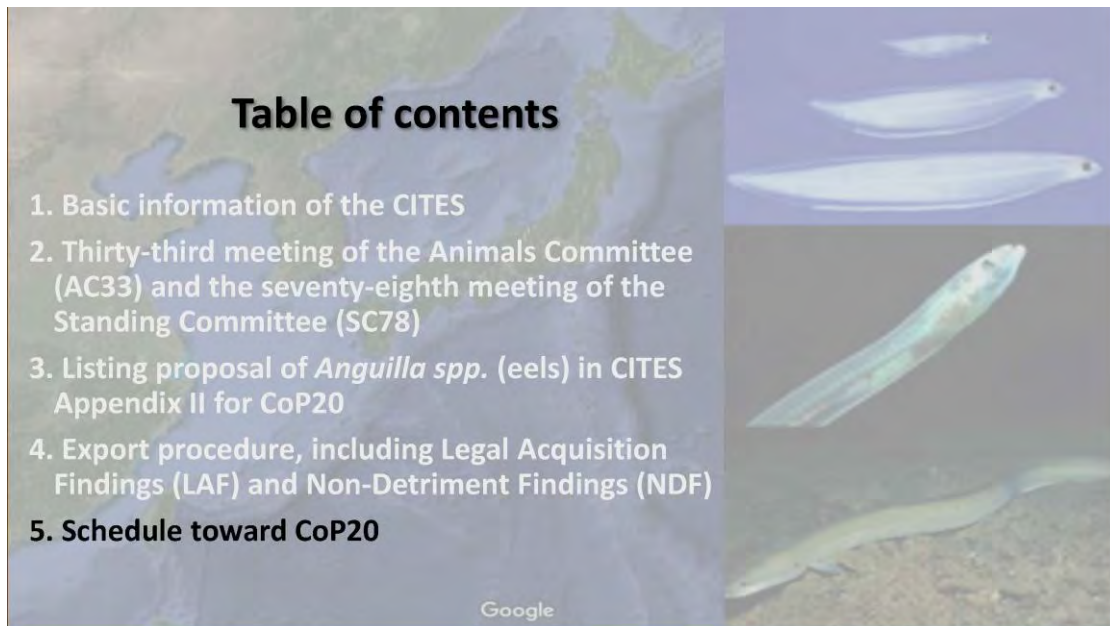


Ishikura-net (86 spots in 40 rivers and 2 lakes)



Re-stocking of eels
(about 1-3 million glass eels/year + grown individuals)

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Schedule toward CoP20

Event	Date and Venue
Decision in Council of EU on submission of listing proposal	17 June 2025
The deadline for the submission of proposal to amend CITES Appendices	27 June 2025
FAO Expert Advisory Panel for the assessment of proposal to amend CITES appendices	7-11 July at Bangkok 21-25 July at Rome
The 20th meeting of the Conference of the Parties (COP20)	24 November – 5 December 2025, Samarkand (Uzbekistan)

Thank you for your attention

附件 11 任務分組會期外活動報告

SM04 Doc.12

Report on the Intersessional Activities of the Task Teams

1. The main activity of Task Team 1 this year was to draft a guideline to the identification of glass eel species (see Doc 17).
2. There were changes to the Task Team members (see member list for full details):
 - a. Korea's members have changed
 - b. Shannan Crow from New Zealand has joined
 - c. New staff at Nagano University, Japan: Takeru Kodama, Huỳnh Quang Thiện
3. Launch of website to assist in publicizing activities
<https://eel-task-team.ifb-research.jp>
4. Ongoing discussions regarding future collaborative research and activities of the Task Teams
 - a. Investigate sex ratio of yellow and silver eels in local habitats?
 - b. Practical training workshops?
 - c. International satellite tagging cooperation?
 - d. Other ideas?

Eel Task Team Report 2025

Leanne Faulks and Hiroshi Hakoyama

Background

Task Team 1

- Develop relationship among scientists
- Collect and organize long-term time-series data including fishery-independent data such as eDNA
- Understand and forecast the stock trend of Japanese eel

Task Team 2

- Exchange information on tracking techniques
- Track migration paths of Japanese eel and the other relevant eels
- Analyze and evaluate tracking data

Members

- Korea's members have changed
- Shannan Crow from New Zealand has joined
- New staff at Nagano University, Japan: Takeru Kodama, Huỳnh Quang Thiện

Glass eel identification

- Reliable identification of glass eels seen as an important step in ensuring sustainable and well-managed fisheries
- Researchers and fieldworkers in Japan drafted guidelines, then requested input from Task Team members
- More details in agenda item 8, Doc 17

Website launch

- <https://eel-task-team.ifb-research.jp/>
- Please link and share and contact Hiroshi Hakoyama if you would like to make any updates

Future collaboration and activities

- Investigate sex ratio of yellow and silver eels in local habitats?
 - Use and optimization of Yu-San Han's genetic method for determining sex
- Practical training workshops?
 - eDNA
- International satellite tagging cooperation?
 - Australia
- Other ideas?

附件 12 A review of adaptive management methods based on population dynamics models Towards management of farmed glass eel (Speaker: Hiroshi Hakoyama)

SM04 Doc.13

SM04/Doc13: A review of feedback management methods based on population dynamics models: Towards management of farmed glass eel

The 4th Scientific Meeting on Japanese Eel and Other Relevant Eels,
Hamamatsu, Japan, June 16–17, 2025

Hiroshi Hakoyama

June 16, 2025

hiroshi-hakoyama@nagano.ac.jp

Institute of Freshwater Biology, Nagano University

1/26

Feedback Management

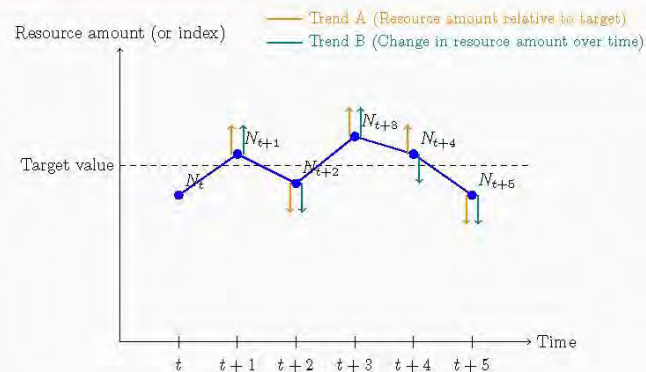
Feedback management is a form of adaptive management where management actions are iteratively adjusted based on changes in resource status to enable learning under uncertainty (see Walters and Hilborn, 1978; Allen et al., 2011; Williams and Brown, 2016, for adaptive management).

A Feedback Management Procedure

If the resource amount (or its index) is greater than the target value, increase the catch, otherwise decrease it. If the resource amount is increasing, increase the catch, otherwise decrease it (Tanaka, 1980; Harada and Nakajima, 1991; Harada et al., 1992).

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How Feedback Management Adjusts Catch



Upward arrows indicate trends suggesting an increase in the catch decision at the next time step, while downward arrows indicate trends suggesting a decrease. At each time $t+2$, the catch decision is made by combining two trends observed at time $t+1$:

Trend A compares resource amount N_{t+1} with the target, and Trend B compares the change from N_t to N_{t+1} .

3/26

Merits and Challenge of Feedback Management

Merits in Feedback Management

- Allows resource management without detailed quantitative information about resource dynamics, such as absolute stock size or stock-recruitment relationships.
- Managing multi-species systems usually requires estimating many parameters, which is very difficult; feedback management only needs information about the resource status.
- Considering the difficulty of modeling resource dynamics, feedback management is a practical and valuable option.

Challenge in Feedback Management

- The main challenge is how to stabilize the resource-fishery system. This system tends to oscillate, similar to the population dynamics of two interacting species. Effective feedback management must address this instability to ensure sustainable resource use.
- Uncertainty (process and observation errors) may destabilize the system.

4/26

Tanaka 1980's Simulation

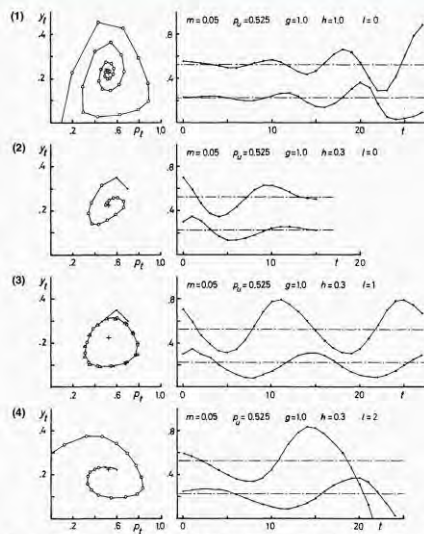


Fig. 3. Some examples of simulation of the stock-fishery system. Left figure: + mark indicates equilibrium point. Right figure: upper curve, p_t ; lower curve, y_t ; chain lines, equilibrium levels.

For the left figures, the horizontal axis represents stock abundance, and the vertical axis represents catch amount.

1. Stock oscillates strongly and goes extinct.
2. System converges to a stable equilibrium.
3. Stock persists with periodic fluctuations.
4. Even if starting near equilibrium, stock goes extinct.

Tanaka also analytically derived stability conditions for the equilibrium point.

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Harada 1992's Quota-Control Model

Population Dynamics

$$N_{t+1} = s(N_t - Y_t) + F(N_{t-l} - Y_{t-l}) \quad (1)$$

- N_t : Resource abundance at time t
- Y_t : Harvest at time t
- s : Survival rate
- $F(\cdot)$: Recruitment function
- l : Maturity age (years)

Quota-Control Rule

$$Y_{t+1} = h(N_{t-m} - T) + g(N_{t-m} - N_{t-m-1}) + Y_t \quad (2)$$

- T : Target stock level
- h, g : Feedback coefficients
- m : Time lag in management implementation

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Harada 1992's Effort-Control Rule

Population Dynamics

$$N_{t+1} = s \{N_t (1 - E_t)\} + F(N_{t-l} (1 - E_{t-l})) \quad (3)$$

Effort-Control Rule

$$E_{t+1} = h(N_{t-m} - T) + g(N_{t-m} - N_{t-m-1}) + E_t \quad (4)$$

- E_t : Effort (exploitation rate) at time t
- $h(N_{t-m} - T)$: Deviation from target stock (Trend A)
- $g(N_{t-m} - N_{t-m-1})$: Recent change in stock (Trend B)

These control rules apply equally well when using CPUE as the feedback variable instead of stock abundance.

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Harada 1992's Analytical Results

Key Findings

- The optimal control parameters maximizing system stability (speed of recovery) can be derived analytically.
- Feedback control improves stability and can stabilize equilibria that are unstable under constant harvest policies.
- Stability increases with a higher target stock level T , and decreases with sustainable yield Y^* .
- Maturity age l has little effect if other parameters remain constant.
- Longer management delay m narrows the range of the stable parameter set.
- Effort-control is generally more stabilizing than quota-control.

8/26

Feedback Management in Multi-Species System

- Species interactions (e.g. competition, predation) affect the system stability.
- Harada and Nakajima (1991) showed that, if the harvest of each species in a multi-species system can be independently controlled, then the system can be stabilized either by constant-effort management based on known recruitment relationships or by feedback control without assuming recruitment relationships, and each method implies the other.
- Feedback control is not always effective in multi-species systems; certain interaction patterns can cause instability, and its applicability is still debated (Matsuda and Abrams, 2004; Das and Kar, 2019).

9/26

Feedback Management by Controlling the Size of Marine Protected Areas

- A feedback management procedure adjusts the size of a marine protected area (MPA) based on stock abundance or CPUE, increasing it when stock conditions fall below a target and reducing it when above (Kai and Shirakihara, 2005, 2008).
- The effectiveness of MPA-based feedback management depends on species mobility, recruitment dynamics, and the frequency and timing of management responses; overly frequent or delayed adjustments also reduce stability.

10/26

Feedback Management of Glass Eel Input in Japanese Eel Aquaculture

- The supply of glass eels for aquaculture is restricted to about 80% of the previous fishing season's level by the Eel Informal Consultation.
- However, this input limit has been set based on past levels for over a decade and has remained constant, with the cap never reached due to low catches.
- There is a growing need for scientific management of glass eel stocking quantities; some empirical approaches have been examined in our previous work (see Appendix).
- Eel populations have declined due to various factors such as environmental changes and fishing pressure. Regardless of the debate over the current fishing intensity, effective fisheries management is essential to prevent resource depletion and ensure the long-term sustainability of the stock.
- Although accurate stock assessments are currently difficult, trends in the population can be monitored via CPUE estimates.
- Given this, applying feedback management to regulate glass eel stocking amounts may be a promising approach.

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Summary

- Feedback management adjusts harvest based on resource trends without detailed stock data.
- Stability depends on system parameters and management delays.
- Multi-species interactions complicate feedback control effectiveness.
- Feedback methods can control MPA size or glass eel stocking.
- Applying feedback management to glass eel input is a promising way to support sustainability.

Thank you very much for listening!

12/26

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13/26

Appendix: Empirical Methods for Glass Eel Management: the limit on eel seeds input into aquaculture ponds

Introduction

The decline of the Japanese eel (*Anguilla japonica*) population has remained a great concern. Four participants (China, Japan, Korea, and Chinese Taipei) have begun working to manage the Japanese eel population, and issued a joint statement in 2014. They agreed to restrict the initial input of glass eels taken from the wild into aquaculture ponds, but the limit was not based on objective grounds. (1) Here, we estimated a rough standard on the seed supply for aquaculture based on the past almost-unexploited population status using the time-series of the fisheries catch, the initial input of seeds, and the aquaculture production. (2) Based on a Leslie Matrix model, we tested whether the decline of the eel population was caused by the decrease of the birth rate or by the decrease of the survival rate using the time-series of the catch of seeds and yellow eels. These parameters correspond to overfishing of wild seeds and habitat destruction, respectively. Which one causes population to decrease?

Fisheries management of Japanese eel

A cooperative management program is necessary in order to recover the eel population.

- Joint Statement of 4 participants in September, 2014:
- Conservation and management of eel resources
 1. Actions to restrict initial input of glass eels (80% of the 2013-2014 level)
 2. Monitoring initial input of eel seeds into aquaculture ponds and aquaculture production
 3. Collecting statistics on trade of aquaculture eels and eel products
- Future work
 1. Participants will continue to discuss measures to improve the transparency of eel trade.
 2. Participants will consider possible establishment of legally binding framework as appropriate.

Fisheries management of Japanese eel

Current status in Japan in response to Joint Statement

1. Initial input management: the limit on the supply of seed for aquaculture is 21.7 ton (= 80% of the 2013-2014 level)
2. The limit is restricted by a law (the Inland Water Fishery Promotion Act, 2014).

Issues

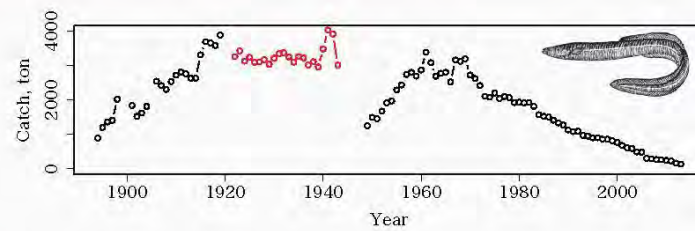
There is no reasonable grounds to set the current limit to 21.7 ton.

Calculate the amount of glass seeds for aquaculture

Idea

- The supply of seed for aquaculture in the past when the eel population was almost-unexploited is a rough standard of the limit of the amount of seeds.
- Estimate the rough standard from the time-series of the fisheries catch, the initial input of seeds, and the aquaculture production (Hakoyama, Fujimori, Okamoto and Kodama, 2016).

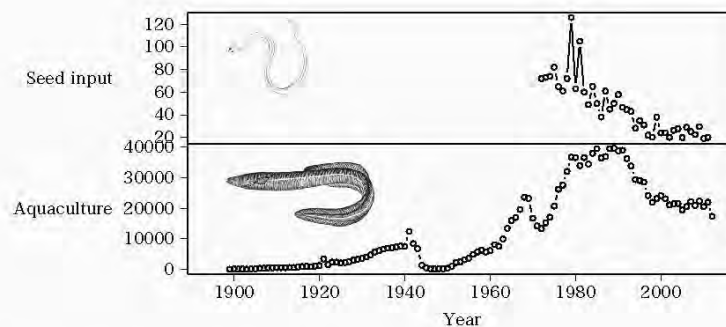
Catch of eels in the inland fisheries of Japan



- 1900–1919: a developmental period
- 1920–1943: a stable period before world war II
- 1950s a developmental period after world war II
- 1960– a decreasing period

⇒ The population was probably almost-unexploited in the past stable period (1920–1943), and the initial input of seeds at that time can be regarded as a rough standard.

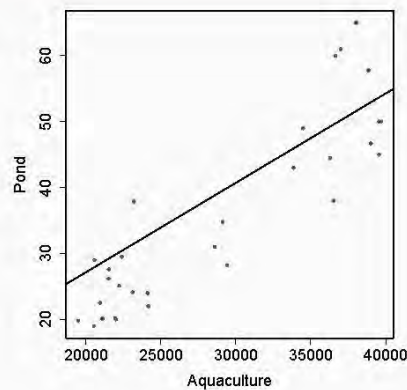
Time-series of the seeds and the aquaculture production



- The seeds will be for aquaculture production
- No data is available for the amount of seeds before 1971

⇒ Examine the relation between the production and seeds using the data after 1982

The relation between the production and seeds of aquaculture (1982–2011)



$$y = 1.4 \times 10^{-3}x, R^2 = 0.91$$

⇒ Estimate the past amount of seeds extrapolating the obtained linear regression

Estimates of the amount of seeds in the past stable period (1920–1943)

Mean: 6.3 ton, Min: 1.5 ton, Max: 15.7 ton

Remark

We did not consider the historical improvement of aquaculture technology and the change of seed size. Although there is room for improvement on the estimate, it can be regarded as a rough standard for the limit on eel seeds input into aquaculture ponds.

Grounds for regulation

What causes population to decrease?

It can be argued that it might be ineffective to limit the exploitation of eel seeds because the eel seed fisheries are not the dominant cause of population decline. The destruction of the freshwater and coastal environments (habitats of yellow eels) are assumed to be the main cause of population decline.

Are there any grounds to limit the exploitation of eel seeds?

⇒ Time-series data of fisheries may give some insights into the causality of the population decline of Japanese eel.

Age-structured Model

$$\begin{pmatrix} J_{t+1} \\ A_{t+1} \end{pmatrix} = \begin{pmatrix} 0 & m \\ p & 0 \end{pmatrix} \begin{pmatrix} J_t \\ A_t \end{pmatrix}$$

- If the birth rate m and the survival rate p are constants and the Leslie Matrix is irreducible, the population reaches a stable age distribution
- If m and/or p are low enough, the population declines.
- If the birth rate m decreases (e.g., by seeds fisheries), the proportion of Juvenile decreases.
- If the survival rate p decreases (e.g., by the destruction of adult's habitats), the proportion of Juvenile increases.

⇒ We can identify the cause of population decline by the time-series of the proportion of glass J and yellow A eels.

Effect of seeds fisheries is integrated in the effective birth rate

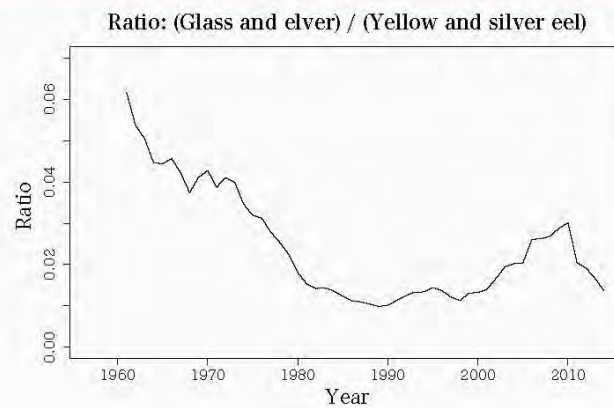
$$\begin{pmatrix} J_{t+1} \\ A_{t+1} \end{pmatrix} = \begin{pmatrix} 0 & m \\ p & 0 \end{pmatrix} \begin{pmatrix} J_t \\ A_t \end{pmatrix} - \begin{pmatrix} f J_{t+1} \\ 0 \end{pmatrix}$$

$$\Updownarrow$$

$$\begin{pmatrix} J_{t+1} \\ A_{t+1} \end{pmatrix} = \begin{pmatrix} 0 & m^* \\ p & 0 \end{pmatrix} \begin{pmatrix} J_t \\ A_t \end{pmatrix}$$

where f is the fisheries coefficient and $m^* = m/(f + 1)$ is the effective birth rate. The m^* decreases with seeds fisheries ($m^* < m$).

Time-series of the proportion of glass eel and yellow eel (5 year moving average)



- The proportion of glass eel and yellow eel is decreasing.
- ⇒ If the catch is a good index of abundance, this result suggests the decrease of the birth rate m (e.g., by seeds fisheries).

Conclusions

1. A rough standard for the limit on the seed supply based on the past almost-unexploited population status.
2. An age-structure model implies that there is a ground to limit the exploitation of eel seeds.

附件 13 Migratory life cycle of *Anguilla anguilla* a mirror symmetry with *A. japonica* (Speaker: Yu-San Han)



The 4th Scientific Meeting on Japanese
Eel and Other Relevant Eels,
Hamamatsu, Japan, June 16-17, 2025



SM04 Doc14

Migratory life cycle of *Anguilla anguilla*: a mirror symmetry with *A. japonica*

Chinese Taipei

Dr. Yu-San Han

Professor, Institute of Fisheries, National Taiwan University

E-mail: yshan@ntu.edu.tw



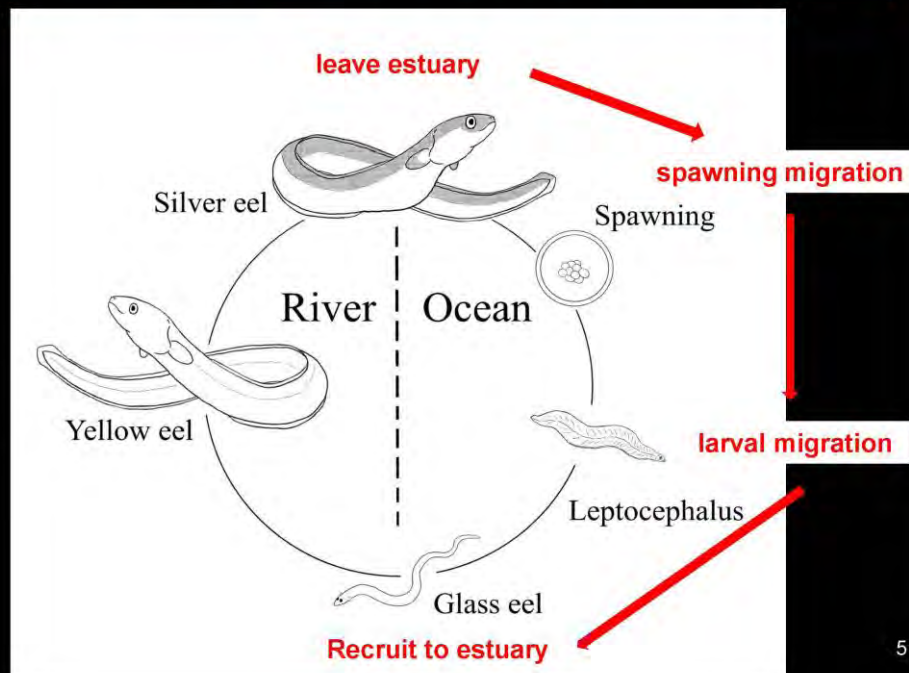
1

Content

- 1. Life cycle and resources of eels**
- 2. Seaward migration timing of Japanese and European eels**
- 3. Spawning migration of silver eels**
- 4. Larval transport and larval duration**
- 5. Glass eels recruiting to growth habitats**

2

The genus *Anguilla* exhibits a catadromous life cycle



5

Life cycles characters temperate and tropical eels

Temperate eel	Tropical eel
Longer migratory distances	Shorter migratory distances
Seasonal spawning migration	Prolonged spawning migration
Concentrated spawning period	Discrete spawning period
Seasonal glass eel recruitment	Discrete glass eel recruitment

EX.



6

Objective

**Elucidating the timing patterns
of the migratory life cycles of the
Japanese and European eels**

7

Content

1. Life cycle and resources of eels
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5. Glass eels recruiting to growth habitats

8

Growth duration from glass eel to silver eel

Glass eels to silver eels **4 - >20 years**



Growth habitats



Freshwater river

Estuary

Coastal area

9

Seaward migration timing of silver eels

European eel



Typically commences during the autumn and winter periods, specifically from **Sep. to Jan.**

Japanese eel



Typically commences during the autumn and winter periods, specifically from **Oct. to Feb.**

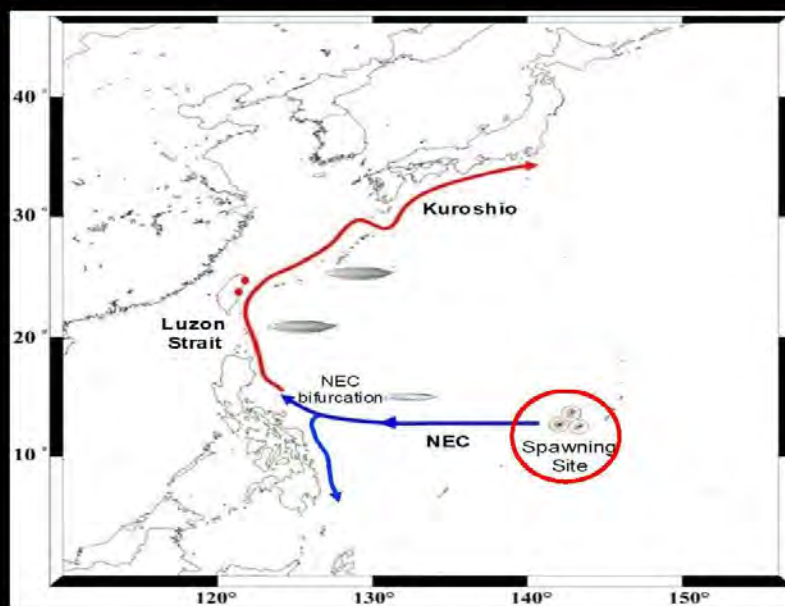
10

Content

1. Life cycle and resources of eels
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- 3. Spawning migration of silver eels**
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5. Glass eels recruiting to growth habitats

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Spawning location of Japanese eels



Hsiung et al., 2022

12

Spawning migration route of Japanese eel

Studied by PSATs (Pop-up tag)

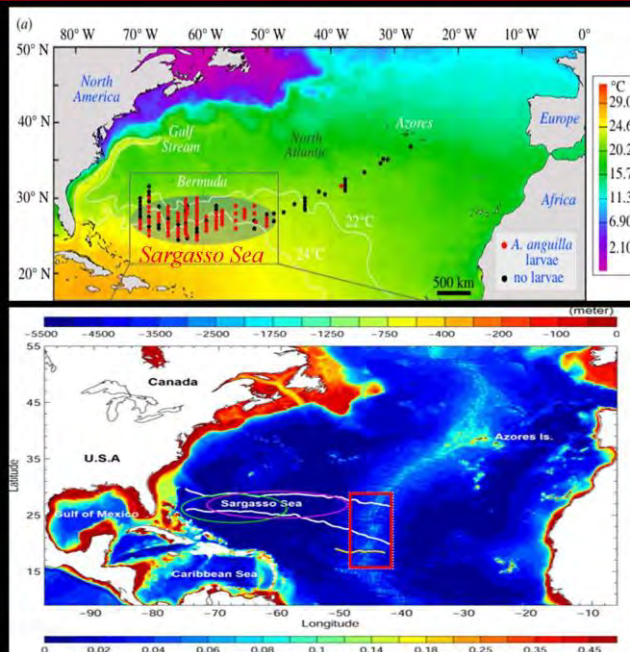
3 hypotheses:

- 1) Initially swim northward with the Kuroshio, and then head southward to the spawning area
- 2) Swim to the spawning area by shortest distance
- 3) Swim against the flow of the Kuroshio and the North Equatorial Current



Hsu et al., 2024

Spawning location of European eels



Miller et al., 2019

A new speculated spawning area in Mid-Atlantic Ridge

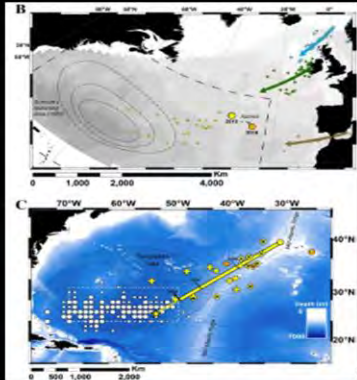
Chang et al., 2020

14

Spawning migration route of European eel

Studied by PSATs (Pop-up tag)

European silver eels may traverse through the Azores archipelago, than migrate to the Sargasso Sea.



Wright et al., 2022



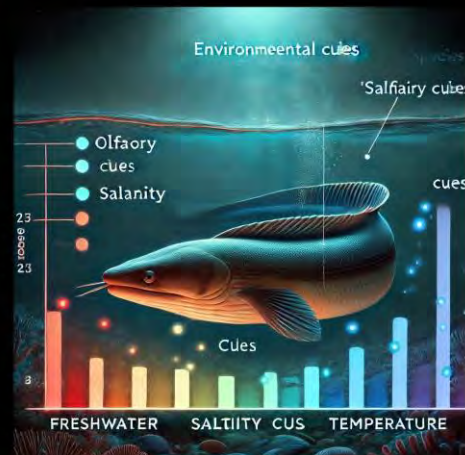
Hsu et al., 2024

Migration cues of Japanese and European eel

Geomagnetic sensing and compass orientation



Olfactory, salinity, and temperature cues



16

Migration duration of Japanese and European eel

The estimated migration duration of Japanese silver eels from estuary to spawning area is approximately **4-6 months**, with an average swimming speed of 20 kilometers per day.

VS.

Migration distance of European eel is about double that of Japanese eel. Therefore, the migration duration of European silver eels may be approximately double, taking nearly **one year**.

17

Spawning timing of Japanese and European eel



The Mysterious, Vexing, and Utterly Engrossing Search for the Origin of Eels | Hakai Magazine

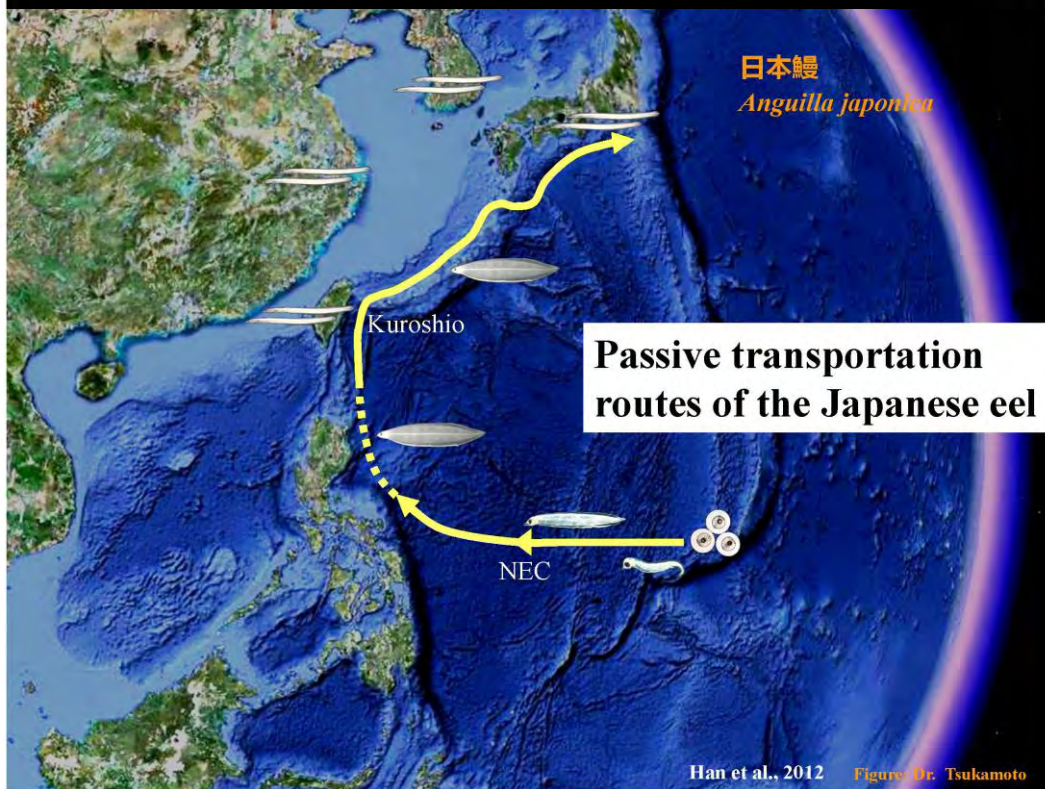
Migration start	Migration time	Spawning time
Japanese eels: Oct. to Feb.	Half a year	Japanese eels: May to Sep.
European eels: Sep. to Jan.	One year	European eels: Nov. to Apr.

18

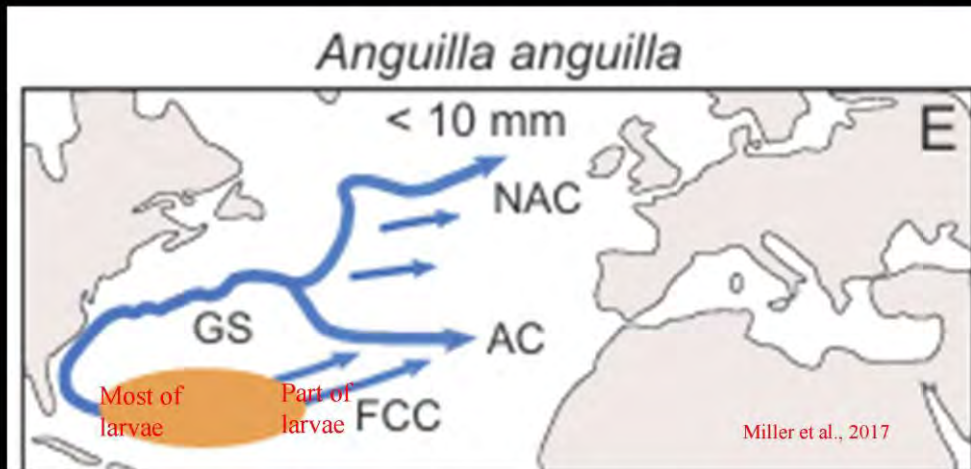
Content

1. Life cycle and resources of eels
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5. Glass eels recruiting to growth habitats

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Passive transportation routes of the European eel



GS: Gulf Stream; FCC: Frontal Countercurrent; NAC: North Atlantic Current; AC: Azores Current

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Larval duration of Japanese eels

1. Estimates from otolith daily rings:

Species	Location	TL (mm)	L-TL (mm)	LD (days)	EGR (mm/day)	References
<i>A. japonica</i>	Kyushu, Japan	57.4 ± 2.0	65.6 ± 2.3	140.0 ± 15.0	0.47 ± 0.07	Kawakami et al., 1999
<i>A. japonica</i>	Tungkang River, Taiwan	56.1 ± 2.4	64.1 ± 2.7	134.0 ± 14.1	0.48 ± 0.08	Leander et al., 2013
<i>A. japonica</i>	Shuangshi River, Taiwan	56.8 ± 2.3	64.9 ± 2.6	135.7 ± 16.6	0.48 ± 0.09	Leander et al., 2013
<i>A. japonica</i>	Mingchiang River, China	55.1 ± 1.9	63.0 ± 2.2	139.6 ± 10.1	0.45 ± 0.05	Leander et al., 2013
<i>A. japonica</i>	Qiantang River, China	55.6 ± 1.9	63.5 ± 2.2	148.1 ± 14.7	0.43 ± 0.08	Leander et al., 2013
<i>A. japonica</i>	Ichinomiya River, Japan	57.4 ± 2.3	65.6 ± 2.6	143.3 ± 7.9	0.46 ± 0.04	Leander et al., 2013
<i>A. japonica</i>	Northern Taiwan	56.1 ± 1.3	64.1 ± 1.5	133.8 ± 7.5	0.48 ± 0.04	Hsiung et al., 2018
<i>A. japonica</i>	Southern Taiwan	55.9 ± 1.6	63.9 ± 1.8	136.0 ± 5.9	0.47 ± 0.03	Hsiung et al., 2018
<i>A. japonica</i>	Northern Taiwan	55.7 ± 2.6	63.7 ± 3.0	140.1 ± 5.8	0.45 ± 0.02	Han et al., 2019
<i>A. japonica</i>	Southern Taiwan	56.7 ± 2.1	64.8 ± 2.4	139.4 ± 8.7	0.46 ± 0.05	Han et al., 2019
<i>A. japonica</i>	Mikawa Bay, Japan	56.8 ± 2.1	64.9 ± 2.4	156.6 ± 6.4	0.42 ± 0.03	Han et al., 2019
<i>A. japonica</i>	Je-Ju Island, Korea	56.6 ± 1.5	64.7 ± 1.7	153.4 ± 4.4	0.42 ± 0.02	Han et al., 2019
<i>A. japonica</i>	Shang-Hai, China	55.7 ± 1.9	63.7 ± 2.2	166.0 ± 11.1	0.38 ± 0.05	Han et al., 2019
<i>A. japonica</i>	Wen-Zhou, China	55.1 ± 1.3	63.0 ± 1.5	158.7 ± 11.3	0.40 ± 0.05	Han et al., 2019

Mean ± SD for the *A. japonica* glass eels' total length at recruitment (TL) and larval duration of leptocephali (LD) reported in previous studies, as well as calibrated total length for leptocephali just before metamorphosing (L-TL) and early growth rate (EGR) calculated based on the L-TL and LD (Hsu et al., 2025)

Larval duration: 4~6 months

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Larval duration of European eels

1. Estimates from otolith daily rings:

Species	Location	TL (mm)	L-TL (mm)	LD (days)	EGR (mm/day)	References
<i>A. anguilla</i>	Loire, France	66.3 ± 3.6	75.8 ± 4.1	185 ± 0.0	0.41 ± 0.02	Lecomte-Finiger, 1992
<i>A. anguilla</i>	Somme, France	65.4 ± 3.2	74.7 ± 3.7	202.4 ± 0.0	0.37 ± 0.02	Désaunay et al., 1996
<i>A. anguilla</i>	Vilaine River, France	69.7 ± 3.5	79.6 ± 4.0	171.7 ± 0.0	0.46 ± 0.02	Désaunay et al., 1996
<i>A. anguilla</i>	Adour, France	65.0 ± 3.4	74.3 ± 3.9	195.4 ± 0.0	0.38 ± 0.02	Désaunay et al., 1996
<i>A. anguilla</i>	Minho River, Portugal	60.6 ± 3.2	69.3 ± 3.7	199.0 ± 27.4	0.35 ± 0.08	Arai et al., 2000
<i>A. anguilla</i>	Severn River, UK	65.0 ± 3.0	74.3 ± 3.5	318.5 ± 17.1	0.23 ± 0.04	Wang & Tzeng, 2000
<i>A. anguilla</i>	Vilaine River, France	66.8 ± 3.5	76.3 ± 4.0	350.9 ± 37.6	0.21 ± 0.04	Wang & Tzeng, 2000
<i>A. anguilla</i>	Viskan River, Sweden	68.1 ± 2.6	77.8 ± 3.0	346.8 ± 36.6	0.22 ± 0.04	Wang & Tzeng, 2000
<i>A. anguilla</i>	Minho Rio, Portugal	68.6 ± 3.0	78.4 ± 3.5	397.1 ± 27.0	0.20 ± 0.03	Wang & Tzeng, 2000
<i>A. anguilla</i>	Vogslækur River, Iceland	68.1 ± 3.7	77.8 ± 4.2	278.0 ± 36.8	0.28 ± 0.06	Kuroki et al., 2008

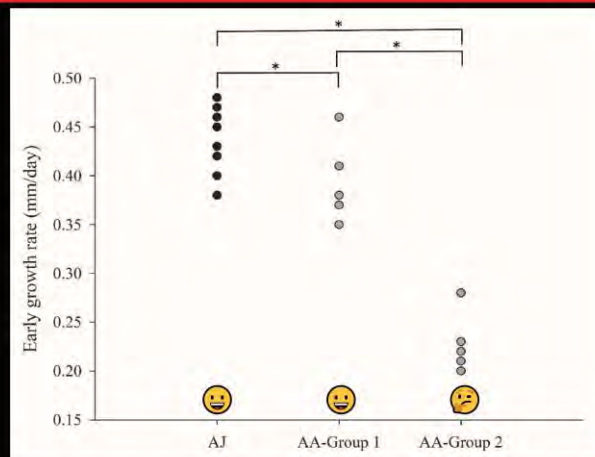
Mean ± SD for the *A. anguilla* glass eels' total length at recruitment (TL) and larval duration of leptocephali (LD) reported in previous studies, as well as calibrated total length for leptocephali just before metamorphosing (L-TL) and early growth rate (EGR) calculated based on the L-TL and LD (Hsu et al., 2025)

Larval duration: 6-13 months

Observed differences in LD may result from observer bias.

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Early growth rates of Japanese and European eels

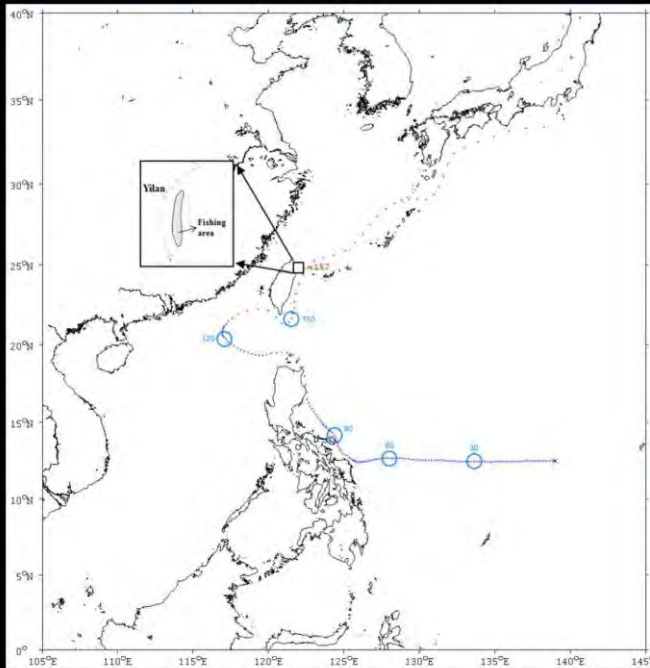


Hsu et al., 2025

Based on the analyses of otolith daily rings and total length of leptocephali, the early growth rates of AA-Group 1 is more reasonable.

24

Larval duration of Japanese eels



2. Estimates from ocean numerical simulation:

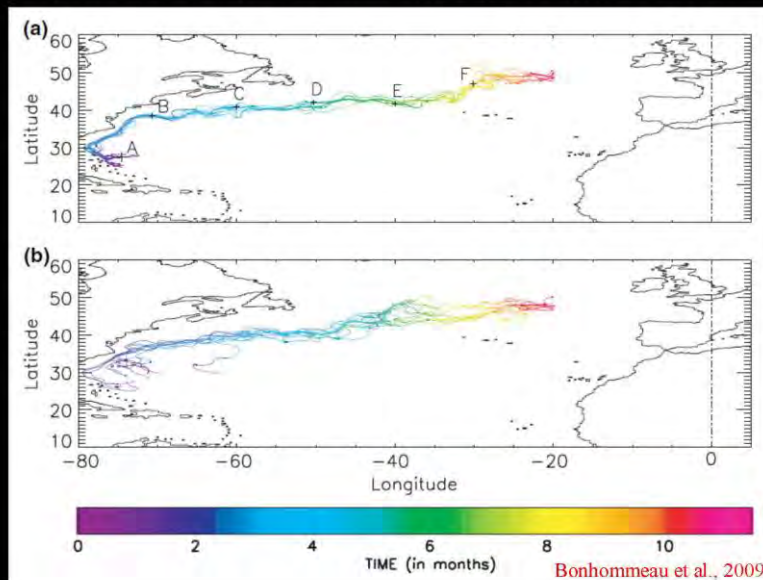
**Larval duration:
Around 5-6
months to Taiwan**

Han et al., 2016

25

Larval duration of European eels

2. Estimates from ocean numerical simulation:



Bonhommeau et al., 2009

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Larval duration of European eels

2. Estimates derived from ocean numerical simulation:

Table 1. Number of particles released that succeeded in crossing the 20°W line, minimum migration duration and distance covered for the fastest particles for the two ocean configurations (Drakkar and Mercator) and the three behaviours (fixed-depth, vertical diurnal migration and fastest current choice). Bonhommeau et al., 2009

Ocean configuration	Behaviour	No. of particles released over the whole period	No. of particles succeeding in crossing 20°W (as % of those released)	Minimum migration duration	Distance covered (km)
Drakkar	Fixed-depth	47 342 592	0.0025	10 months 19 days	8447
	Vertical migration	1 972 608	0.0011	1 yr 3 months	9699
	Fastest current choice	1 972 608	0.0014	1 day 28 days	9199
Mercator	Fixed-depth	7 602 144	0.039	10 months 3 days	8498
	Vertical migration	475 200	0.0004	1 yr 2 months	8928
	Fastest current choice	475 200	0.0006	18 days 1 yr 2 months 21 days	9748

Larval duration: range from 10 - 15 months

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Content

1. Life cycle and resources of eels
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Recruiting seasons for Japanese glass eels

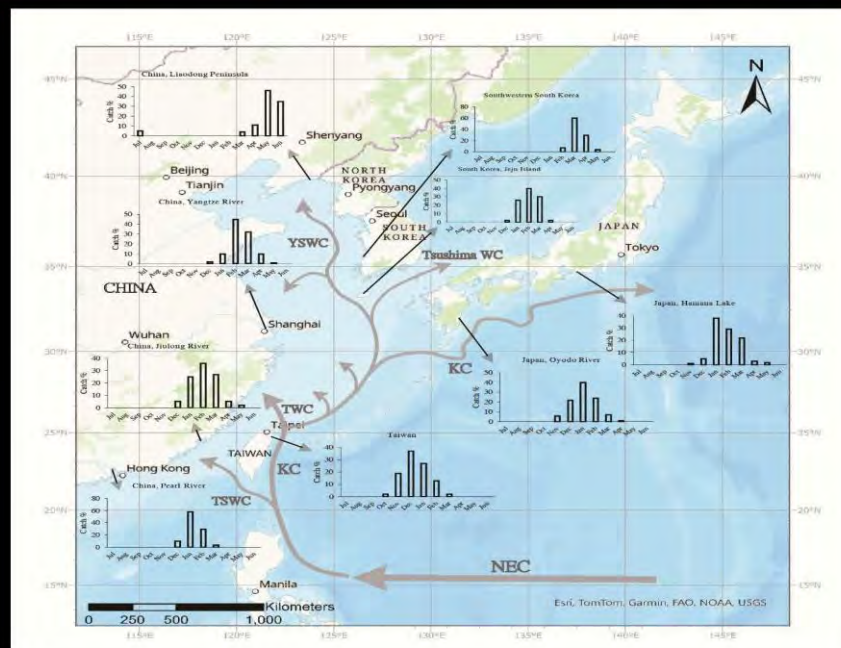
Recruiting seasons of Japanese eels (AJ) in East Asia (Hsu et al., 2025)

Species	Location	Months of recruitment	Months with peak recruitment	References
AJ	Taiwan	Oct ~ Mar	Dec ~ Jan	Cheng and Tzeng, 1996; Han et al., 2012, 2016, 2019; Taiwan glass eel catch reporting system over the years
AJ	Japan, estuary of the Oyodo River	Nov ~ Apr	Dec ~ Feb	Aoki et al., 2018
AJ	Japan, entrance of the Hamana Lake	Nov ~ May	Jan ~ Mar	Fukuda et al., 2016
AJ	South Korea, Jeju Island	Dec ~ Apr	Jan ~ Mar	Kim, 1974
AJ	Southwestern South Korea	Feb ~ May	Mar ~ Apr	Hwang et al., 2014
AJ	China, estuary of the Yangtze River	Dec ~ May	Feb ~ Mar	Guo et al., 2017, 2024
AJ	China, estuary of the Jiulong River	Dec ~ May	Jan ~ Mar	Chen, 1982
AJ	China, estuary of the Pearl River	Dec ~ March	Jan ~ Feb	Shuai et al., 2023
AJ	China, Liaodong Peninsula	Mar ~ Jul	Apr ~ May	Beijing Institute of Zoology, Chinese Academy of Sciences et al., 1976

Recruiting season varies among different countries due to larval migration distance and duration.

29

Recruiting times and routes of Japanese glass eel



30

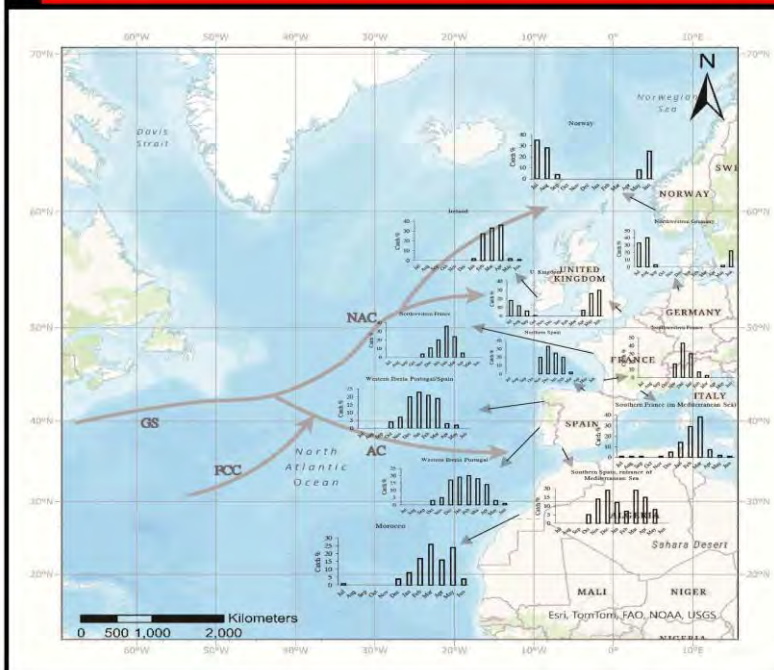
Recruiting seasons for Japanese glass eels

Recruiting seasons of European eels (AA) in Europe and Morocco. (Hsu et al., 2025)

Species	Location	Months of recruitment	Months with peak recruitment	References
AA	Western Iberia Portugal/Spain	Oct ~ May	Dec ~ Mar	Stratoudakis et al., 2024
AA	Western Iberia Portugal	Oct ~ Jun	Dec ~ Mar	Jorge and Sobral, 1989; Domingos, 1992; Stratoudakis et al., 2018
AA	Southern Spain, near the entrance of Mediterranean Sea	Oct ~ May	Nov ~ May	Arribas et al., 2012
AA	Northern Spain	Nov ~ March	Nov ~ Feb	Iglesias et al., 2010; Aranburu et al., 2016
AA	Southwestern France	Nov ~ March	Dec ~ Jan	Bru et al., 2009; Aranburu et al., 2016
AA	Northwestern France	Nov ~ Apr	Jan ~ Mar	Gascuel et al., 1995; Briand et al., 2003
AA	Southern France (in Mediterranean Sea)	Nov ~ Sep	Jan ~ Mar	Crivelli et al., 2008; Maes et al., 2009; Lagarde et al., 2022; Bouchard et al., 2022
AA	Morocco	Dec ~ Jul	Feb ~ May	Yahyaoui et al., 1983; Sabatié and Fontenelle, 2007
AA	Ireland	Jan ~ Jun	Feb ~ Apr	O'Leary et al., 2022
AA	U. Kingdom	Apr ~ Oct	May ~ Jun	Naismith and Knights, 1988
AA	Northwestern Germany	May ~ Sep	Jun ~ Aug	Diekmann et al., 2019
AA	Norway	May ~ Sep	Jun ~ Aug	Hvidsten, 1985

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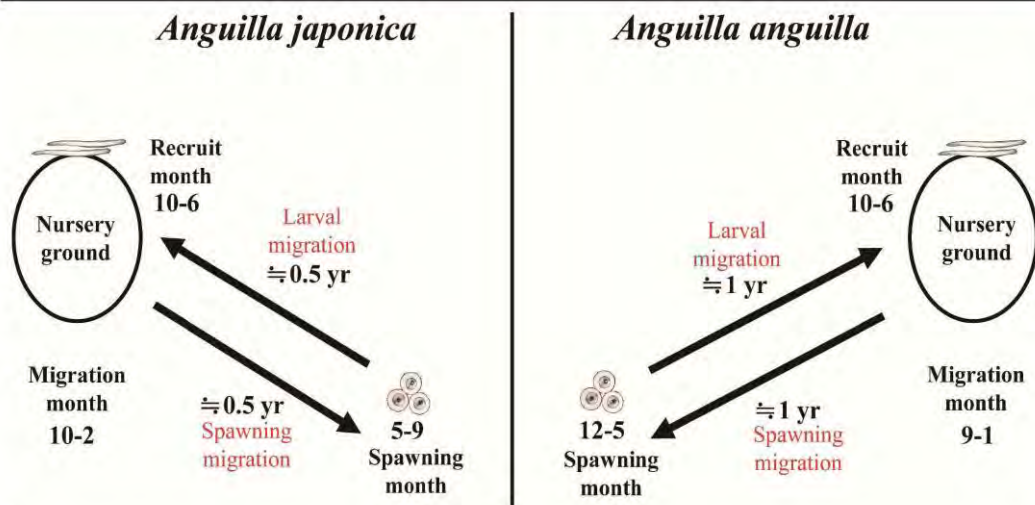
Recruiting times and routes of European glass eel



If the LD of European eels exceeds two years, the recruitment pattern of glass eels may become more dispersed due to diffusion effects.

32

Symmetry migratory life cycles of both eels



33

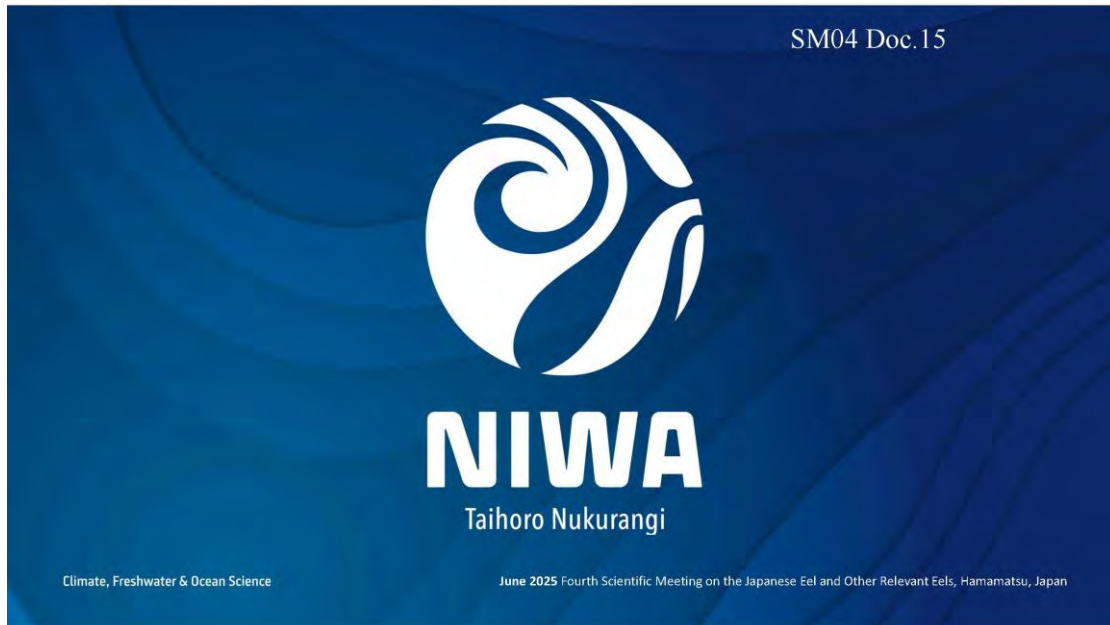
Thank You



HAN'S EEL LAB
韓玉山鰻魚實驗室

34

附件 14 Eel recruitment patterns at hydroelectric stations across New Zealand (Speaker: Shannan Crow)



Values supported by tuna (eels)



Values supported by tuna (eels)



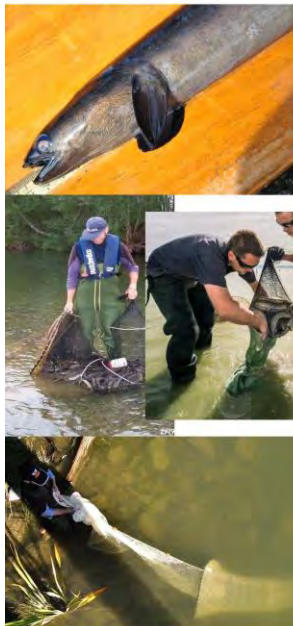
Species distribution



Anguilla dieffenbachii,
maximum size 2.0 m and 25 kg



Anguilla australis
maximum size 1.1 m and 3 kg



Wild capture fishery



Adult stages only
220 g to 4 kg



The fishery

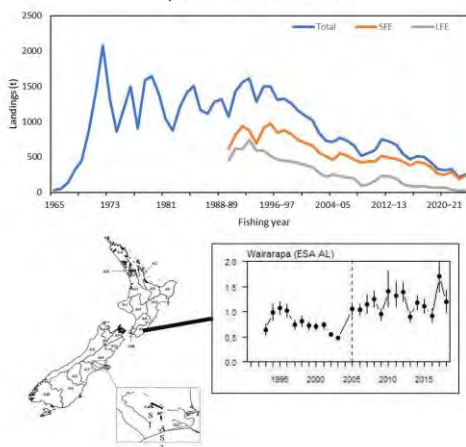
Preferences for the 2 species

- Illegal to harvest glass eels
- Recreational fishery
 - Targets adult eels
- Customary fishery
 - Adult & migrant eels
 - Mātaitai
- Commercial fishery
 - Adult & migrant eels
 - Waikato River by-laws
- Closed areas to commercial fishing

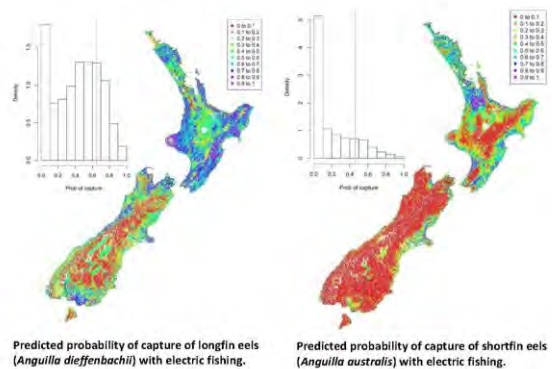


Adult eel information

Commercial eel catch and catch-per-unit-effort



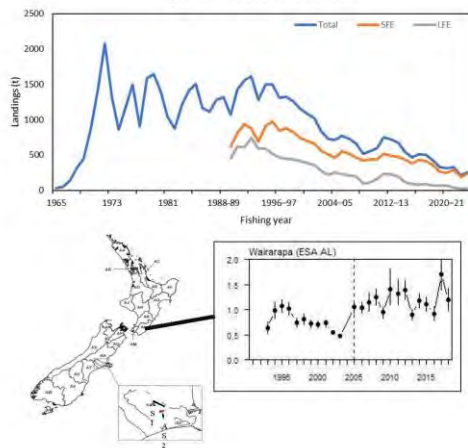
Probability of capture models



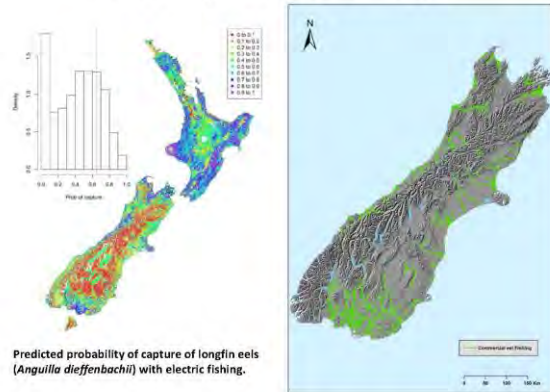
Crow, S.R.; Booker D.J.; Sykes, J.R.E.; Unwin, M.J.; Shankar, U. 2014: Predicting distributions of New Zealand freshwater fishes. NIWA Client Report CHC2014-145.

Adult eel information

Commercial eel catch and catch-per-unit-effort



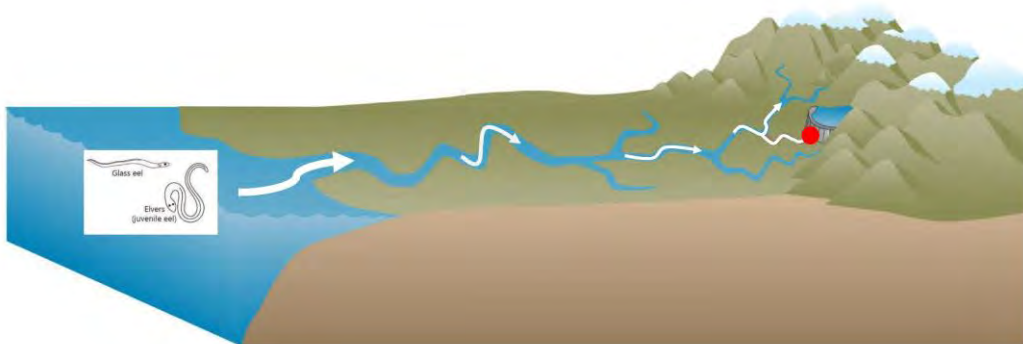
Probability of capture models



Crow, S.K.; Booker D.J.; Sykes, J.R.E.; Unwin, M.J.; Shankar, U. 2014. Predicting distributions of New Zealand freshwater fishes. NIWA Client Report CHC2014-145.

Beentjes, M.P.; Sykes, J.; Crow, S. (2016). GIS mapping of the longfin eel commercial fishery throughout New Zealand, and estimates of longfin habitat and proportion fished. New Zealand Fisheries Assessment Report 2016/32. 53 p

Eel recruitment information



Elver catch at hydroelectric barriers

Large dams block access to 30 % of the river network

Resource consent

- Facilitate upstream eel passage with **fish pass** and/or **trap and transfer schemes**



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Smaller structures



Elver recruitment program

- Well established elver trap and transfer programmes across New Zealand.
- Majority led by mana whenua.
- Fisheries New Zealand funds data collection and trend analysis
- NIWA's role is to collate data and support mana whenua with data collection and complete data analysis.
- One line of evidence used to monitor the state of the tuna fishery in Aotearoa

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Elver recruitment program

- Trap examples

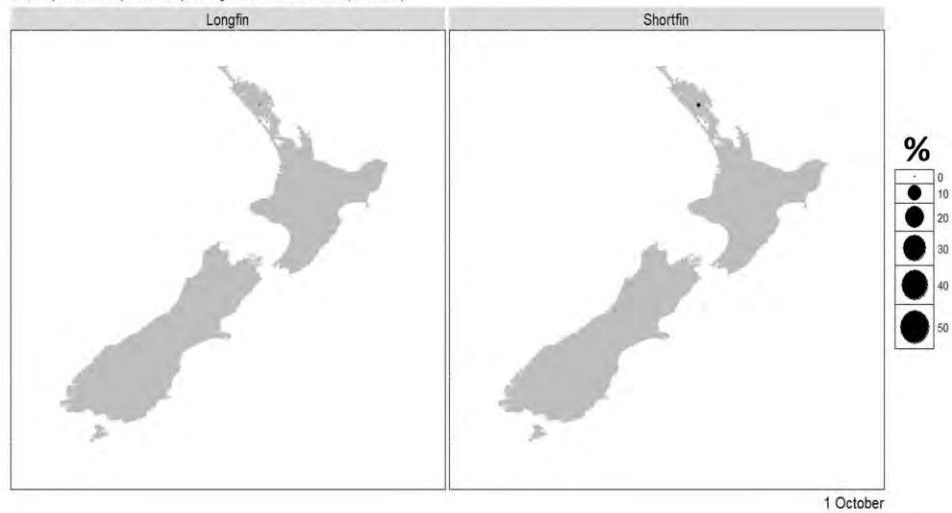


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Catch patterns across Aotearoa during summer

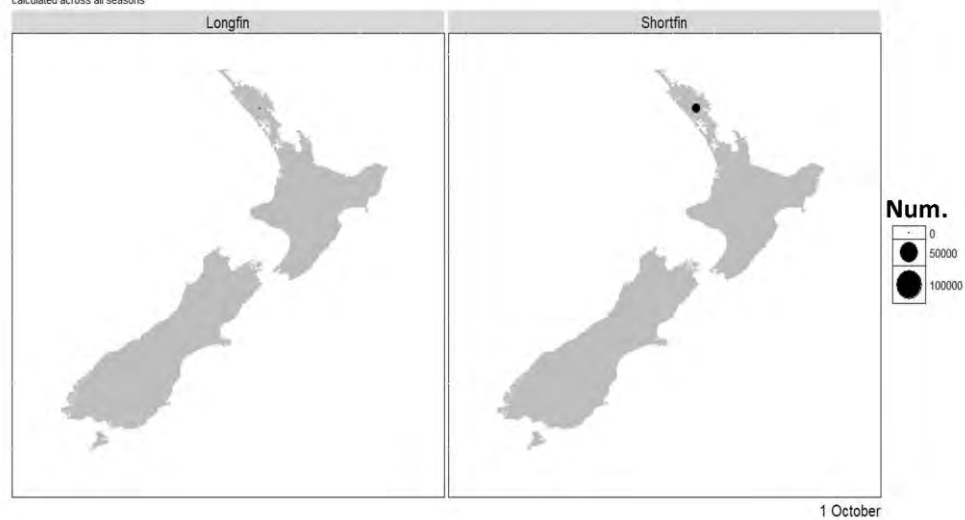
Mean daily elver catch percentage

Mean daily elver catch expressed as a percentage of the mean annual catch (all seasons)



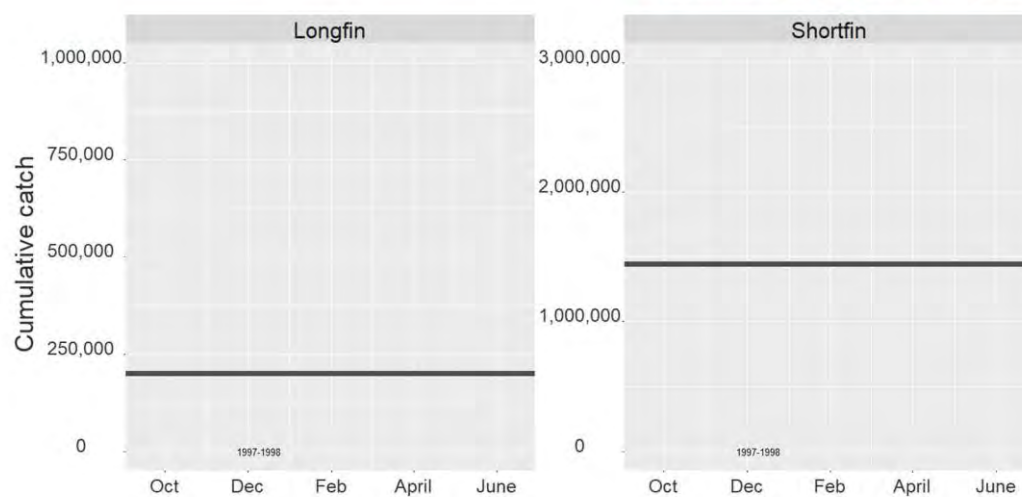
Catch patterns across Aotearoa during summer

Mean daily elver catch number
calculated across all seasons



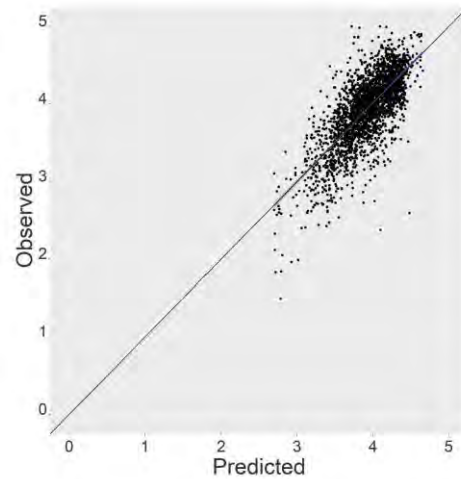
Within site catch variation

What drives these daily catch differences ?



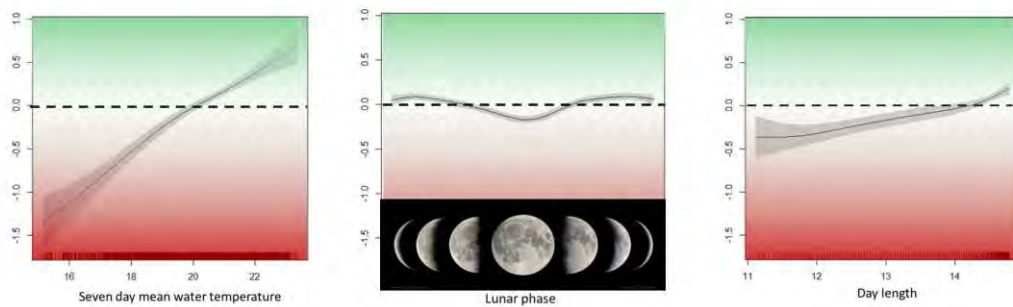
Relationships between the environment and shortfin elver catches

- Explained 74% variation in shortfin daily (Log10 transformed catch)
- Covariates
 - Fishing time (Log10 days)
 - Lunar phase
 - Rain (mm) (Log10 transformed)
 - Julian day (autocorrelation matrix)
 - Seven day mean water temp
 - Seven day mean flow (Log10 transformed)
 - Recruitment year (Random effect)



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Relationships between the environment and shortfin elver catches



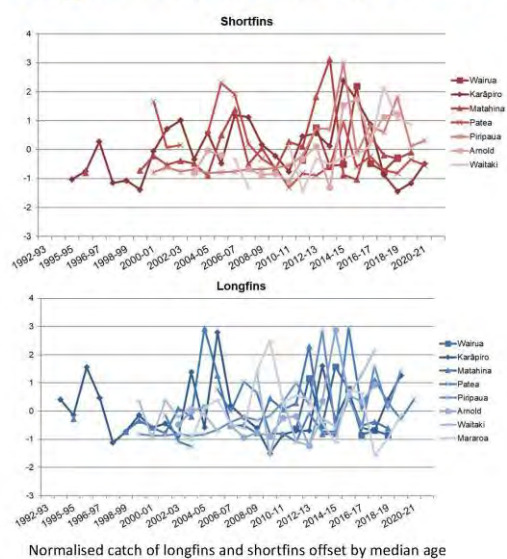
Best catches will happen when:

1. Water temperature is above 19 degrees
2. Dark moon phases
3. Longer days in middle of summer

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Longterm trends in elver catches



Shortfin catch trends across Aotearoa were highly variable, but have remained stable over the timeseries

Longfin catch trends across Aotearoa were highly variable, but have remained stable over the timeseries

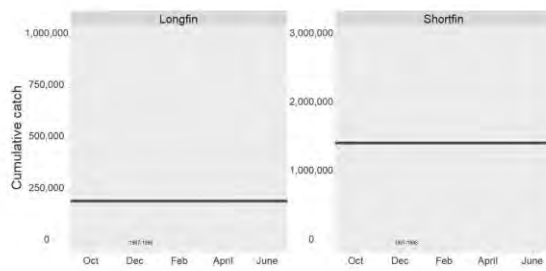


Recruitment patterns

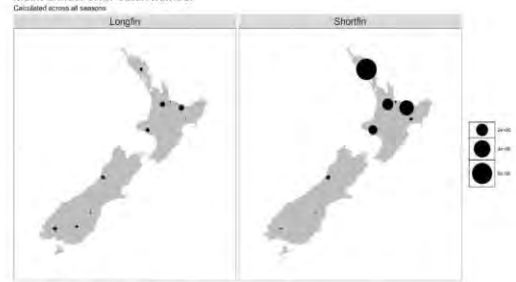
Differences across Aotearoa

- Higher shortfins catches in the North
- Catches start later in the South

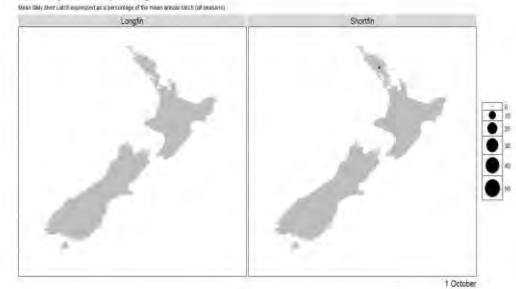
Recruitment remained stable



Mean annual elver catch number



Mean daily elver catch percentage



Drivers of daily elver catches

Moon phase

- New moon phase had a positive effect on catches, whereas full moon had a negative effect on catches

Daylength

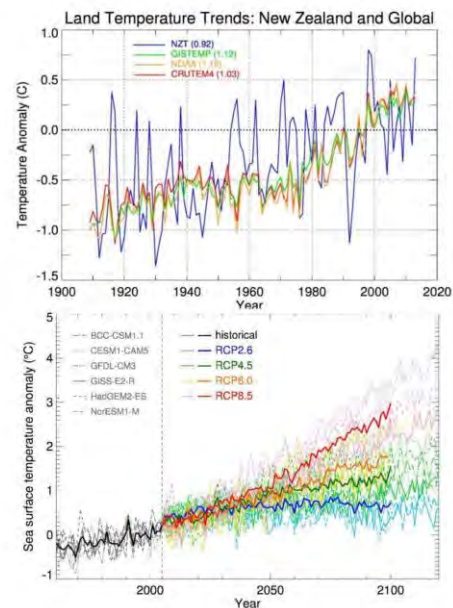
- Longer days had larger catches



Drivers of daily elver catches

- Water temperature key driver for both species
- Shown in glass eels in NZ and America
- Temperature changes in the climate will bring changes to the recruitment season

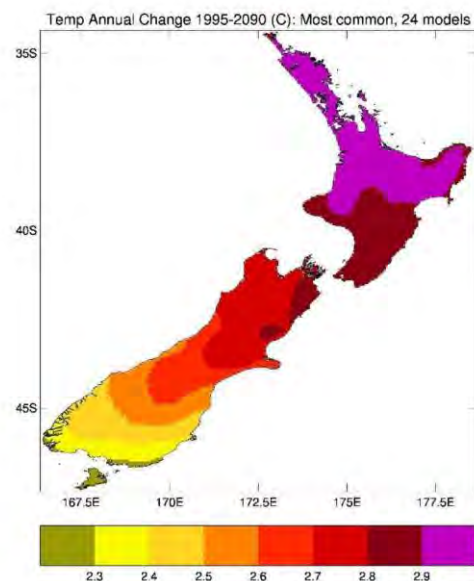
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Drivers of daily elver catches

- Water temperature key driver for both species
- Shown in glass eels in NZ and America
- Temperature changes in the climate will bring changes to the recruitment season
- Temperature changes may also vary spatially

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Thank you

- Thank you for the invitation, Professor Hiroshi Hakoyama
- Thank you for the support Kyuutaro Yasumoto, Hiroshi Tsukamoto, Toya Takehara
- Japan Fisheries Agency for the opportunity to attend



Ngā mihi maioha

- Fisheries New Zealand for the funding and particularly Dr. Marc Griffiths for his continued support
- Erina Watene
- Ngāti Koroki Kahukura
- Raukawa
- Zane Eramiha, Inia Murch, Poto Davies, Mihi Hohepa, Anaru Begbie, Aiden Riki-Te Kanawa, Levi Turner-Nathan
- Jacques Boubée
- Saird Ferguson, Gail Thompson
- Ngāti Hau
- Blair Waiwai and LWHRT/ Waikaremoana, Te Urewera
- Kokōpu Trust
- Te Rūnanga o Moeraki
- Te Rūnanga o Awarua
- Meridian Energy
- Northpower
- Mercury Energy
- Manawa Energy

附件 15 Habitat use history of eels on their spawning migration and its latitudinal cline in Japan (Speaker: Nobuto Fukuda)

SM04 Doc.16

The Fourth Scientific Meeting on the Japanese Eel and Other Relevant Eels,
under the Informal Consultation on International Cooperation for Conservation and Management
of Japanese Eel Stock and Other Relevant Eel Species
2025/06/16-17 @Hamamatsu Act City, Hamamatsu, Japan



Habitat use history of eels on their spawning migration and its latitudinal cline in Japan

Kazuki YOKOUCHI¹, and Nobuto FUKUDA²

¹Fisheries Resources Institute, Japan Fisheries Research and Education Agency (FRA)

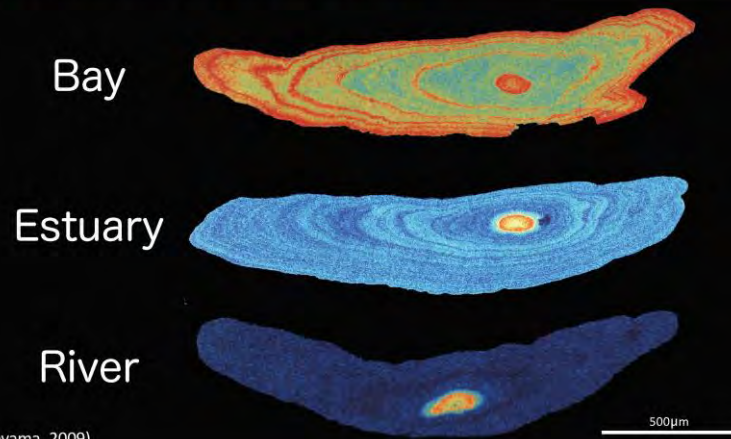
²Fisheries Technology Institute, Japan Fisheries Research and Education Agency (FRA)

Summary

This work was supported in part by the Japan Fisheries Research and Education Agency (FRA) and the Fisheries Agency of Japan (FA) under the Research Project for Eel Recruitment and Habitat.

- The otolith Sr/Ca ratio analysis was carried out to estimate the nursery history (life history type and migration type) of 550 individuals that started their spawning migration and were collected in estuaries and inner bays in five regions of Japan.
- The present study revealed that the proportion of life history types differs from region to region and may change over time.
- The results of this study will also be used to discuss effective management and conservation of Japanese eel according to the life history characteristics of each site.

Partial migration of anguillid eels inferred from otolith Sr/Ca ratios



Partial Migration and Life-History Diversity

Ecological context

- Partial migration: Only part of a population migrates
- Important for life-history strategies and population resilience

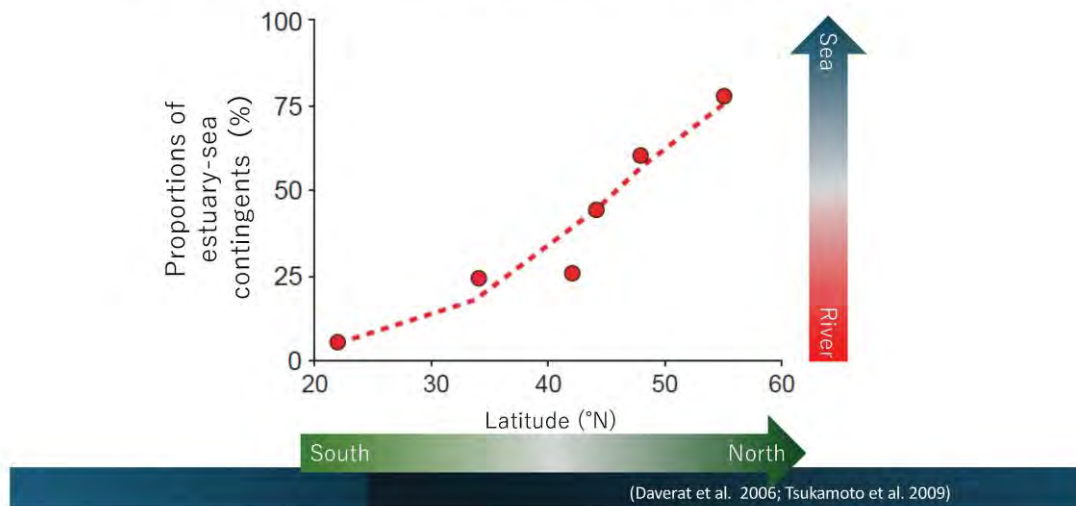
Knowledge Gap

- Mechanisms behind partial migration under changing environments are still unclear

Focus Taxa

- Temperate eels – remarkable partial migration across freshwater and marine habitats

Latitudinal cline of the eel catadromy



Backgrounds

- Latitudinal patterns of partial migration in Japanese eels are still not well understood.
- Climate change may be shifting their distribution, but its effects on migration behavior remain unclear.

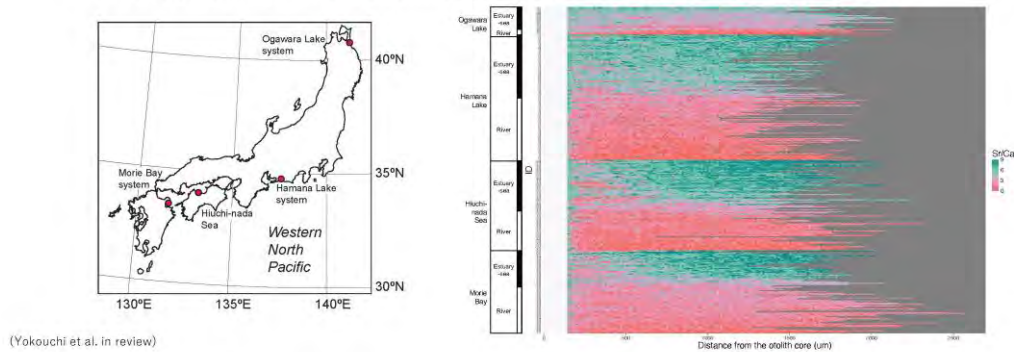
Objectives

This study uses nationwide Sr/Ca data to explore how partial migration varies with latitude — and what that means for eel conservation.

(Yokouchi et al. in review)

Using Otolith Sr/Ca Ratios to Trace Migration Patterns of eels

- Species: Japanese eel (*Anguilla japonica*), silver-phase
- Sample: 355 individuals collected in four model waters of Japan
- Method: Otolith microchemistry (Sr/Ca ratios) to infer habitat use



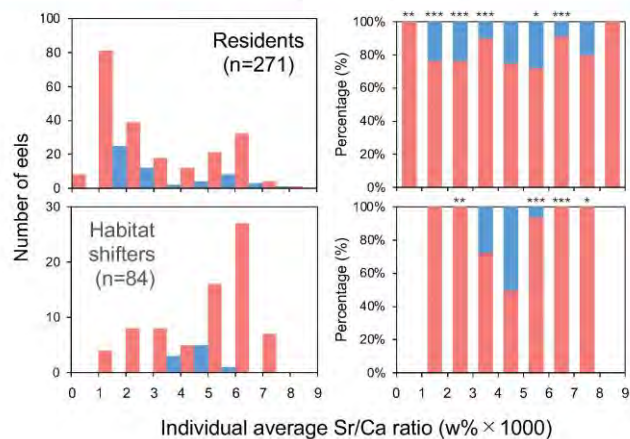
Sex-Specific Habitat Partitioning

Key Findings

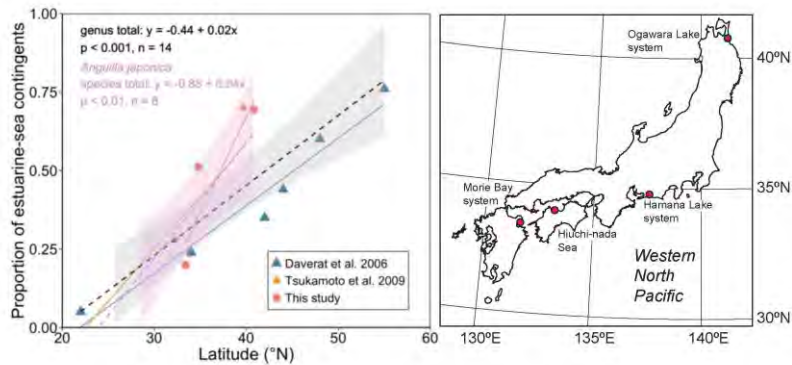
- Males were more abundant in estuarine areas (Yokouchi et al., 2012).
- New finding: Females were more abundant in marine areas.

Conservation Implications

- Protect inner bays and estuaries for female eel development.
- Restore river connectivity to sustain reproductive populations.



Latitudinal Variation in Migratory Behavior



• Results indicates geographic variation in migration patterns

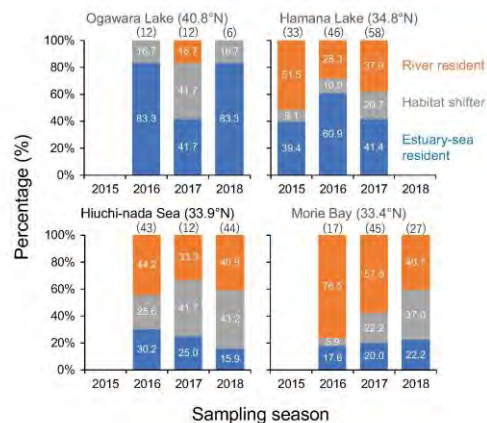
• Eels in northern systems prefer more saline habitats

• Possible drivers: environmental gradients like temperature, productivity

(Yokouchi et al. in review)

Stable yet Flexible Migration Strategies

- Partial migration is sex- and region-dependent
- Contingents relatively stable across years
- One site showed temporal change – environmental influence?
- Implications for conservation and population management



(Yokouchi et al. in review)

Wrap up

This work was supported in part by the Japan Fisheries Research and Education Agency (FRA) and the Fisheries Agency of Japan (FA) under the Research Project for Eel Recruitment and Habitat.

- The otolith Sr/Ca ratio analysis was carried out to estimate the nursery history (life history type and migration type) of 355 individuals that started their spawning migration and were collected in estuaries and inner bays in four regions of Japan.
- The present study revealed that the proportion of life history types differs from region to region and may change over time.
- The results of this study will also be used to discuss effective management and conservation of Japanese eel according to the life history characteristics of each site.

附件 16 Guidelines for the morphological identification of glass eels

Guidelines for the morphological identification of glass eels endemic to Asia and Oceania

Summary

Monitoring eel recruitment is crucial for understanding trends in population size and to ensure that there are a sufficient number of adults to sustain future generations. In this manual, we provide a practical guide for the morphological identification of eel species in Asia and Oceania, with a focus on species endemic to East Asia. The identification key is based on two external characters: the position of the dorsal fin and the pigmentation patterns on the caudal peduncle and caudal fin. This manual is intended to be useful for fishers and authorities to allow rapid, on-site classification in the field, especially for commercially important species.

Morphological species identification of glass eels

The following external characters will be used for species identification, as illustrated in Figure 1:

- Pigmentation on the caudal peduncle and caudal fin: Using this feature, eels can be sorted out into three groups: (1) no pigmentation on the caudal region, (2) pigmentation on the caudal peduncle (tail bud), (3) and pigmentation on the caudal fin (Tabeta et al. 1976, Reveillac et al. 2009, Leander et al. 2012, see Section 2.1).
- Position of dorsal fin origin relative to the anus: This character has been widely used in previous papers (Tesch 2003, Watanabe et al. 2004, Silfvergrip 2009, Leander et al. 2012) in the form of the ratio of the length from the dorsal fin origin to the anus (anodorsal or dorsoanal fin length; ADL) and the total length (TL). This character allows for the classification of eels into two groups: shortfin eels and longfin eels. And in some cases, it is also useful to differentiate the closely related species (see Section 2.1).

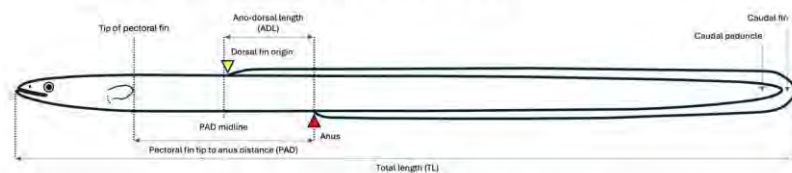


Figure 1. Terminology used for morphological identification of glass eels (after Nakabo (ed) 2002, Watanabe et al. 2004, Leander et al. 2012).

1) Identification of glass eels from the East Asia region (China, Japan, Republic of Korea and Chinese Taipei)

Several temperate and tropical eel species are distributed in East Asia and this region is an important area for eel trading worldwide, particularly for the Japanese eel (*A. japonica*). According to previous publications, three to four *Anguilla* species are known to occur in this area: *A. japonica*, the Indian shortfin eel (*Anguilla bicolor pacifica*), the giant mottled eel (*Anguilla marmorata*), and the Luzon mottled eel (*Anguilla luzonensis*). *Anguilla luzonensis* is rare in this area.

Herein, we provide identification keys for eel species in East Asia based on morphological characters.

Dichotomous key using caudal pigmentation (Figure 2):

1. Weak caudal pigmentation *A. japonica*
 Specific caudal pigmentation 2
2. Pigmentation on caudal peduncle (tail bud) *A. marmorata* or *A. luzonensis*
 Pigmentation on caudal fin *A. bicolor pacifica*

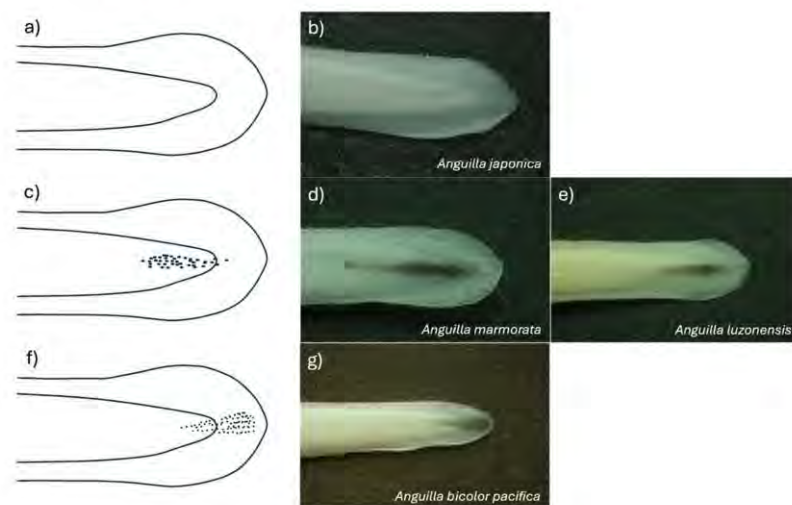


Figure 2. Illustration showing differences in caudal pigmentation among eel species in Japan: a-b) *Anguilla japonica*,

c-d-e) *A. marmorata* and/or *A. luzonensis*, and f-g) *A. bicolor pacifica* (after Tabeta et al 1976, Leander et al. 2012).

Photos by Yu-San Han.

Dichotomous key using position of dorsal fin origin (Figure 3):

1. Short-finned eel; dorsal fin origin located just above the anus *A. bicolor pacifica*
 Long-finned eel; dorsal fin origin located anterior to the anal fin 2
2. Dorsal fin origin located at or posterior to the midpoint between the tip of the pectoral fin and the anus *A. japonica* or *A. luzonensis*
 Dorsal fin origin located anterior to the midpoint between the tip of the pectoral fin and the anus *A. marmorata*

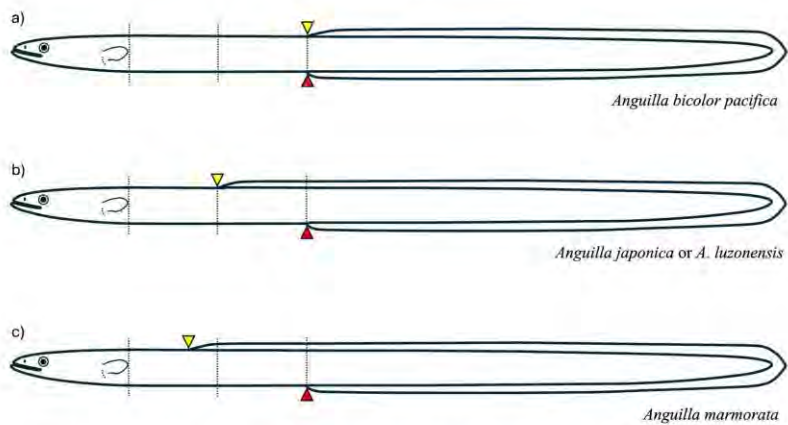


Figure 3. Illustration of differences in the positions of the dorsal fin origin among three eel species in Japan: a) *Anguilla bicolor pacifica*, b) *A. japonica* or *A. luzonensis*, and c) *A. marmorata*. Vertical dotted lines indicate (from left to right) the tip of the pectoral fin, the midpoint between the tip of the pectoral fin and the anus, and the anus. Yellow and red triangles indicate the positions of the dorsal fin origin and the anus, respectively (after Nakabo (ed.) 2002, Tesch 2003, Silfvergrip 2009).

To improve identification, it is recommended to use the above two keys in combination. For glass eels, the primary morphological character to observe is the pigmentation pattern on the caudal region, followed by the position of the dorsal fin origin.

Dichotomous key using both the position of the dorsal fin origin and caudal pigmentation (Figure 4):

1. Weak caudal pigmentation; dorsal fin origin located at or posterior to the midpoint between the tip of the pectoral fin and the anus *A. japonica*
 Caudal pigmentation present 2
2. Short-finned eel; dorsal fin origin located just above the anus; pigmentation present on the caudal fin tip *A. bicolor pacifica*
 Long-finned eel; dorsal fin origin located anterior to the anus, pigmentation on caudal peduncle (tail bud) 3
3. Dorsal fin origin located posterior to the midpoint between the tip of the pectoral fin and the anus *A. luzonensis*
 Dorsal fin origin located anterior to the midpoint between the tip of the pectoral fin and the anus *A. marmorata*

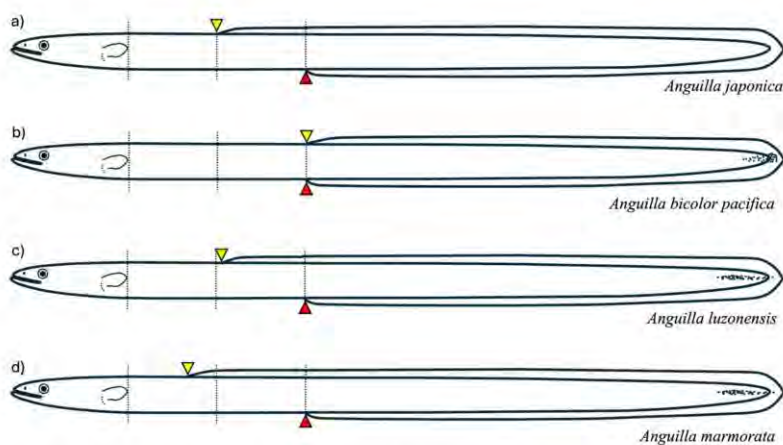


Figure 4. Illustration showing differences in the position of the dorsal fin origin and caudal pigmentation among eel species in Japan: a) *Anguilla japonica*, b) *A. bicolor pacifica*, c) *A. luzonensis*, and d) *A. marmorata*. Vertical dotted

lines indicate (from left to right) the tip of the pectoral fin, the midline between the tip of the pectoral fin and the anus, and the anus. Yellow and red triangles indicate the positions of the dorsal fin origin and the anus, respectively (after Tabeta et al 1976, Tesch 2003, Silfvergrip 2009, Nakabo (ed.) 2002, Leander et al. 2012).

2) Identification of glass eels from the Southeast Asia region (Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Thailand, and Vietnam)

Among the eight species/subspecies of *Anguilla* that are distributed in Southeast Asian countries, two species of shortfin eels (*Anguilla bicolor bicolor* and *A. bicolor pacifica*) and one species of longfin eel (*A. marmorata*) are of economic importance (SEAFDEC 2018). *Anguilla bicolor* and *A. marmorata* can be distinguished using the morphological identification keys provided above. However, it remains difficult to reliably distinguish between the two subspecies of *A. bicolor* based on either morphological characteristics or the currently available genetic information. Therefore, glass eel fisheries stakeholders are encouraged to use the keys where applicable, while acknowledging the limitations in subspecies-level identification for *A. bicolor*.

3) Identification of glass eels from the Oceania region (Australia, Fiji, and New Zealand)

Oceania is home to about nine species/subspecies of anguillid eels (Stuart et al. 2024) and they can be classified into two groups based on the position of the dorsal fin origin relative to the anal fin origin (i.e. shortfin and longfin eels). Additional external morphological characters, such as pigmentation patterns on the caudal region, can also be used for identification.

4) Morphological identification of glass eels of the species *Anguilla japonica*, *A. rostrata*, and *A. anguilla*

In international trade, *A. japonica*, *A. rostrata*, and *A. anguilla* glass eels are exported to various regions, making accurate identification essential, as the species are morphologically similar at this early life stage. Silfvergrip (2009) proposed a practical identification key for intact specimens smaller than 200 mm total length (TL). According to this key the distinguishing characteristic is the ratio of postanal length to the dorsoanal distance (the distance between the anus and the origin of the dorsal fin, see ADL in Figure 1).

Sample median ($N \geq 15$ recommended) of postanal length 5.6–6.0 times dorsoanal distance *A. dieffenbachii* or *A. japonica*
 Sample median ($N \geq 15$) of postanal length 5.0–5.2 times dorsoanal distance *A. anguilla*

However, there are no clear ways to distinguish *A. rostrata* glass eels using external morphological features (Silfvergrip 2009).

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附件 97 Guidelines for the preparation and submission of CITES Annual reports

Guidelines for the preparation and submission of CITES annual reports ([E-Notif-2021](#))

IC18 Doc.18

For European eel (*Anguilla anguilla*), it is essential that **live eels of < 12cm length (and which may be referred to as glass eels or elvers)** in trade are distinguished from other live specimens by reporting them **as fingerlings (FIG)**; other live specimens should be reported as **LIV**. It is also desirable that the code for **meat (MEA)** should be used for trade in eels destined for human consumption. In all cases, Parties should report trade in live specimens (LIV), live fingerlings (FIG) and meat (MEA) of European eel by weight and not as number of specimens. The net weight of live specimens should be recorded and not the combined weight of eels and the water in which they are transported.'

Description	Trade term code	Preferred unit	Alternative unit	Explanation
fingerlings	FIG	kg	no.	live juvenile fish for the aquarium trade, aquaculture, hatcheries, consumption or for release, including live European eels (<i>Anguilla anguilla</i>) up to 12cm in length
meat	MEA	kg		meat, including flesh of fish if not whole (see 'body'), fresh or unprocessed meat as well as processed meat (e.g. smoked, raw, dried, frozen or tinned) The code for meat (MEA) should be used in preference for trade in eels for human consumption.

Terminology for Developmental Stages of Japanese eels

福田 野歩人
Fukuda Nobuto

Fisheries Research and Education Agency

Many terms representing developmental stages of young eels

- Glass eel
- Elver
- Yellow eel
- Juvenile
- fry
- YOY (young of the year)
- Immature fish

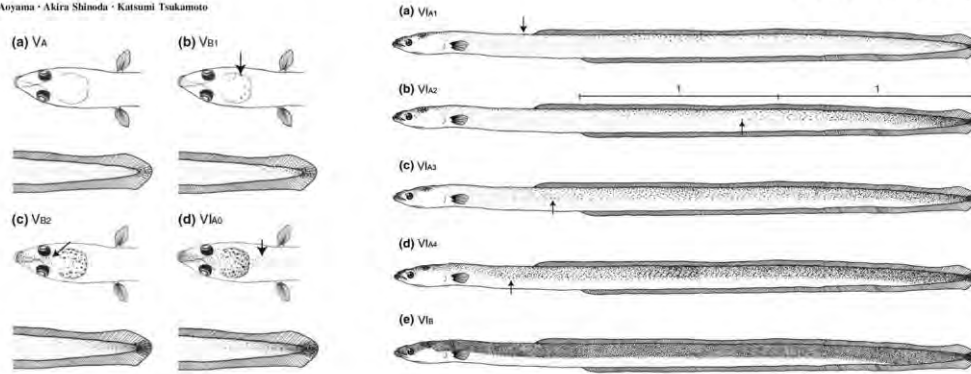
These three terms are commonly used, particularly for the developmental stages of eels.



Evaluation of the pigmentation stages and body proportions from the glass eel to yellow eel in *Anguilla japonica*

Nobuto Fukuda · Michael J. Miller ·
 Jun Aoyama · Akira Shinoda · Katsumi Tsukamoto

Fukuda et al. (2013)



Our previous paper suggested detailed stages from glass eel to yellow eel based on pigmentation, BUT these are not very practical when high scientific accuracy isn't needed.

Practical classification of developmental stages

Glass eel



Elver



Yellow eel



Difference between Glass Eel and Elver

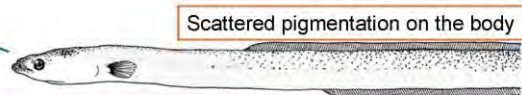
Glass eel

The body is fully or partly transparent, with pigmentation on the body surface still developing.

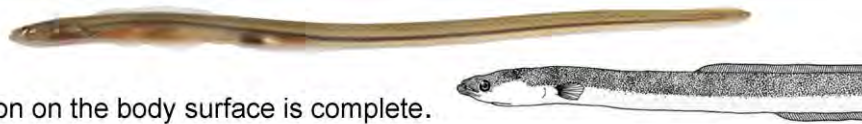
< Early-stage glass eel >



< Late-stage glass eel >



Elver



Pigmentation on the body surface is complete.

Difference between Elver and Yellow Eel

Elver



Ventral View



The shiny pigment (guanine) has **NOT** yet fully appeared in the abdominal cavity

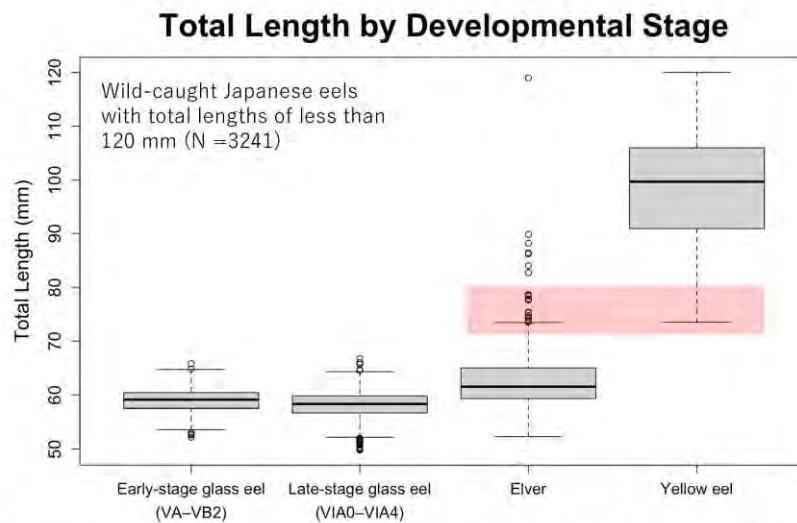
Yellow Eel



Ventral View



The shiny pigment has fully appeared in the abdominal cavity.



A total length of around **80 mm** marks the boundary between Elver and Yellow eel.

Summary

- Glass eel, elver, and yellow eel are standard terms for developmental stages in anguillid eels.
- While finer classifications based on pigmentation exist, these three stages are practical for general use.
- The key difference between glass eels and elvers is the full appearance of black pigmentation on the body surface.
- Elvers and yellow eels are distinguished by the full development of shiny pigment in the abdominal cavity; a total length of 80 mm can also serve as a practical boundary.

附件 19 Draft updated workplan for scientific activities and collaborative research on Japanese eel and other relevant eels (2025-26)

Workplan for Scientific Activities and Collaborative Research on Japanese Eel and Other Relevant Eels (2025-26)

Prepared by the Task Team leaders with support from the Secretariat

Task Team leaders, Assistant Professor Leanne Faulks, Tohoku University, Japan for Task Team 1 and Professor Hiroshi Hakoyama, Nagano University, Japan for Task Team 2, would like to propose the two intersessional tasks for the workplan for scientific activities and collaborative research as below.

Dates	Scientific Meeting/ Informal Consultation/ Task Teams 1 and 2	Works Contents
(2025) June	The 4 th scientific meeting	■ Discuss on the interim report of each task team ■ Draft an updated workplan
June	The 18 th meeting of the Informal Consultation	■ Authorize the latest statistics (catch, trade, input, etc) on eels submitted by Members ■ Approve the updated workplan
July - August	Task Teams 1 and 2	■ Register team members for each task team ■ Determine work plan and role assignments ■ Task Team 1

		- Review the available statistics - Improve collection of fisheries statistics and complementary data - Share and improve knowledge on model analysis - Discuss the potential use of eDNA surveys - Discuss the potential cooperation on research for environmental sex determination (differentiation): A new joint research theme “Investigating the sex ratio of yellow and silver eels in local habitats” has been proposed. Currently, discussions are underway with Prof. Yu-San HAN regarding the use and refinement of an RNA expression-based sex estimation method - Collaborative research on species identification of glass eels: A species identification manual for glass eels in Asia and Oceania is being developed. Task Team members have been invited to contribute country- or region-specific fisheries information to enhance the manual. - Development of agreed upon definitions for different eel life stages - Discuss/identify specific indicators/parameters for stock assessments or trend analysis of Japanese eel as the single stock in Northeast Asian region - Consider organizing practical training
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		workshops (e.g., on eDNA sampling and analysis) based on the proposal from Dr. Prasert Tongnunui. → The idea is to go beyond one-off workshops and establish hands-on training sessions, enabling Task Team members to apply methods in their countries and regions, with possible sample sharing to network labs - Others ■ Task Team 2 - Improve migration tracking survey techniques - Discuss field research plan in East Asian region and the Pacific region - Ongoing email discussions with Dr. Nur Indah Septiarni regarding potential cooperation.
August (2025)-March (2026)	Task Teams 1 and 2	■ Collaborative work based on the plan ■ The Task Team website will be launched as a platform for sharing updates and activities (https://eel-task-team.ifb-research.jp)
(2026) April-May	Task Teams 1 and 2	■ Online workshop/discussion for the Task Teams 1 and 2 / An interim report for the task

May-June	The 5 th Scientific Meeting	■ Discuss on the interim report of each task team ■ Discuss on the progress of species identification guideline for glass eel and definitions for the different eel life stages ■ Draft an updated workplan
May-June	The 19 th meeting of the Informal Consultation	■ Authorize the latest statistics (catch, trade, input, etc) on eels submitted by Members ■ Approve the species identification guideline for glass eel and definitions for the different eel life stages, if possible ■ Approve the draft updated workplan

附件 20 第 4 次科學家會議總結報告

Summary Report of the 4th Scientific Meeting on Japanese Eel and Other Relevant Eels

Date: June 16 and 17, 2025

Venue: Shizuoka, Japan

Item 1: Opening of the meeting

1. Prof. Nobuyuki Yagi (Graduate School of Agricultural and Life Sciences, University of Tokyo), the Chair of the 4th Scientific Meeting on Japanese Eel and Other Relevant Eels, welcomed participants and declared the opening of the meeting.
2. Prof. Hiroshi Hakoyama (Nagano University) delivered an opening address as the host Member of the meeting.
3. The interim Secretariat (Secretariat) introduced the participants from China, Japan, Korea, and Chinese Taipei (hereafter referred to as "Members") (SM04 Doc.04).

Item 2: Meeting arrangement

4. The Secretariat, the Fisheries Agency of Japan and the Global Guardian Trust, explained the meeting arrangements.

Item 3: Adoption of Agenda

5. The participants adopted the provisional agenda without amendment (SM04 Doc.02 rev 1 and 03 rev2).

Item 4: Overview of Japanese eel catch and scientific activities

6. Scientists from each Member reported the overview of Japanese eel catch and scientific activities.

[China]

7. Dr. Song Chao gave a presentation titled *Status of Industry and Scientific Research of Japanese Eel in China* (SM04 Doc.07).
8. A participant from Japan inquired whether the term "bulk agricultural products" on page 4 includes all agriculture, forestry and fisheries food products. Dr. Chao responded that this understanding is correct.
9. A participant from Korea inquired about the number of individuals produced annually in a large-scale breeding base. Dr. Chao replied that over 5,000 parent eels are produced annually.
10. The Chair requested clarification on the source of the eels in the breeding base. Dr. Chao responded that the eels are captured from the wild for breeding.

11. A participant from Japan inquired about fishing gears used to recapture tagged eels. Dr. Chao answered that T-bar tagged eels are occasionally recaptured by fishers using various gears.

[Japan]

12. Prof. Hiroshi Hakoyama delivered a presentation titled *The Overview of Japanese Eel catch and scientific activities (Japan)* (SM04 Doc.08 rev 1).
13. A participant from Japan highlighted several points for consideration in data interpretation: (1) a fishing ban on eels migrating to the ocean, implemented by many prefectures from October to March (for interpretation of yellow eel data); (2) the inclusion of Kuroko (elvers) in glass eel data prior to 1990, along with a decline in the number of eel aquaculture farmers (for interpretation of glass eel data). Prof. Hakoyama acknowledged that these factors should be taken into account, but noted that the observed declining trend in eel catch is likely to be genuine.
14. Dr. Shannan Crow posed two questions: (1) how to distinguish between glass eels and elvers; (2) whether there is information available on the age of elvers. In response to the first question, Prof. Hakoyama explained that coastal data primarily correspond to glass eels and suggested continuing the discussion under Agenda Item 8, if necessary. Regarding the second question, Dr. Nobuto Fukuda noted that while age had not been estimated using otolith analysis, otolith sizes corresponding to eels of 10 cm or less generally indicate young individuals (elvers).
15. A participant from China inquired whether the glass eel catch increased in 2025. Prof. Hakoyama responded that although data for 2025 are not available, the glass eel catch in 2024 increased slightly compared to 2023.

[Korea]

16. Dr. Kyung Mi Jung gave a presentation titled *Current status of management measures and spatial distribution of Anguilla Japonica glass eels in Korea river estuaries* (SM04 Doc.09 rev 1).
17. The Chair posed the following questions: (1) what accounts for the higher density in the Geum River; (2) whether there had been research on large rivers in Southern Korea. In response to the first question, Dr. Jung replied that further analysis is required to identify the environmental factors contributing to the higher density in the Geum River. Regarding the second question, she responded that those rivers have a low presence of glass eels.
18. Dr. Shannan Crow inquired about what influences arrival time of eels. Dr. Jung answered that further analysis is required.
19. A participant from Chinese Taipei sought clarification on the size of the released juveniles. Dr. Jung responded that the size is larger than 10 cm.
20. A participant from Korea provided information that a DNA survey is conducted to ensure that eels to release is a single species (Japanese eels).

[Chinese Taipei]

21. Dr. Yu-San Han and Dr. Ching-Hsien Ho delivered a presentation titled *The overview of Japanese eel catch and scientific activities in Taiwan* (SM04 Doc.10).
22. A participant from Japan sought information regarding the Chinese Taipei's interpretation of the upward trend in Japanese eels since 2019. Prof. Han replied that a longer-term observation is required to determine if the trend is increasing, decreasing or stable.
23. A participant from Japan requested clarification on whether the data on page 5 are the input amount rather than catch, noting that the input amount may contain catch of both Japanese and non-Japanese eel species. Prof. Han responded that he considered the input amount equivalent to the catch amount, considering that the cited newspaper had mentioned only Japanese eels.
24. A participant from China inquired whether migrating eels forage for food when they migrate from rivers to spawning grounds. Prof. Han answered that he had observed a shrinkage of their intestines, suggesting that they do not forage during their migration period.

Item 5: Discussion on the Japanese eel and other relevant eels at the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

(1) Basic information of the CITES

(2) Thirty-third meeting of the Animals Committee and seventy-eighth meeting of the Standing Committee

(3) Listing proposal of *Anguilla* spp. (eels) to CITES Appendix II for CoP20

(4) Export procedure, including Legal Acquisition Findings (LAF) and Non Detriment Findings (NDF)

25. Mr. Kyutaro Yasumoto gave a presentation on the basic information of the CITES, the recent discussions on the Japanese eel and other relevant eels at the CITES, possible listing proposal of *Anguilla* spp. (eels) to CITES Appendix II for CoP20 by EU, and exporting procedures in accordance with CITES, including LAF and NDF (SM04 Doc.11).
26. A participant from Japan proposed including an exchange of views on NDF in the agenda for the next Scientific Meeting. The Members expressed no objections to this proposal.
27. A participant from Japan inquired about the timing for when NDF is required. Mr. Kyutaro Yasumoto responded that NDF would be required once the listing takes effect, which is usually after 90 days of the CITES Conference of the Parties.

Item 6: Report of the intersessional activities

28. Dr. Leanne Faulks, reported on its intersessional activities conducted between the third and fourth Scientific Meetings (SM04 Doc.12).
29. Participants noted the good progress of the work.

Item 7: Emerging science and practical solutions in the management of Japanese eel resource in the Northeast Asian region

[Presentation 1]

30. Prof. Hiroshi Hakoyama gave a presentation titled *A review of adaptive management methods based on population dynamics models: Towards management of farmed glass eel* (SM04 Doc. 13).
31. Dr. Shannan Crow inquired whether CPUE data of adult eels had been collected at the national or smaller scales. Prof. Hakoyama responded that while glass eels had been collected at the prefectural level, limited data are available for yellow eels.
32. The Chair inquired whether it would be appropriate to implement management measures, such as feedback management, based on data from the juvenile stage of eels, considering that management decisions for other fish and marine mammal species are typically based on adult data. In response, Prof. Hakoyama explained that although data for glass eels (juvenile stage) tend to have greater uncertainty, their population trends should still be correlated with those of yellow eels (adult stage).

[Presentation 2]

33. Prof. Yu-San Han (Chinese Taipei) delivered a presentation titled *Migratory life cycle of *Anguilla anguilla*: a mirror symmetry with *A. japonica** (SM04 Doc. 14).
34. A participant from Korea inquired whether glass eels had been sampled from different countries or regions in his studies that relied on existing references. Prof. Han responded that he utilized information from both inside and outside of Chinese Taipei.
35. A participant from Japan inquired whether there are similarities in migratory patterns among eels that share spawning grounds. Prof. Han replied that such eels are different in spawning seasons, depending on species.
36. A participant from Japan inquired about the size of eels upon reaching the shore. Prof. Han explained that Japanese eels measure 5-6 cm, while European eels reach 7-8 cm, suggesting that the latter grow slower but larger by long-term migration.

[Presentation 3]

37. Dr. Shannan Crow (invited expert) gave a presentation titled *Eel recruitment patterns across New Zealand at hydroelectric stations* (SM04 Doc. 15).
38. A participant from Japan inquired about the correlation of time-series catch data between shortfin and longfin eels. Dr. Crow responded that while new settlement of shortfin eels had been found following the removal of longfin eels, he had not observed such interaction between the two species.
39. A participant from Chinese Taipei posed the following questions: (1) whether shortfin eels from Australia and New Zealand be a single species; (2) differences in habitat preferences between shortfin and longfin eels. In response to the first question, Dr. Crow answered that he does not

- have genetic information and thus was not able to provide a definitive answer. Regarding the second question, he responded that shortfin eels tend to prefer higher-altitude areas whereas longfin eels prefer estuary areas.
40. A participant from Korea requested further information on the following points: (1) how elvers are transported in the elver recruitment program; (2) whether juvenile eel releasing is conducted in New Zealand; (3) the stock size of eels in New Zealand. Dr. Crow provided the following responses to each question (1) Elvers are carried using an ice box to further upstream where there is customary fisheries; (2) Juvenile eel releasing is not conducted; (3) The stock size remains unknown.
 41. A participant from Japan posed the following questions: (1) whether there had been collaborative research with neighbouring countries; (2) whether there are lessons learned through his research or management of the eels. In response to the first question, Dr. Crow responded that such collaboration had not taken place yet. Regarding the second question, he highlighted the importance of longer time-series observation and data collection.

[Presentation 4]

42. Dr. Nobuto Fukuda and Dr. Kazuki Yokouchi (Japan) delivered a presentation titled *Habitat use history of eels on their spawning migration and its latitudinal cline in Japan* (SM04 Doc.16).
43. A participant from Japan requested clarification on the age range of the sampled eels. Dr. Yokouchi answered that eels sub-sampled ranged within the general range of the Japanese eel age (silver eel phase).
44. A participant from Chinese Taipei requested a presenter's perspectives on differing conclusions between his and past studies, for the former found more river residents whereas a past study by Dr. Tsukamoto argued that 60-70% eels were marine eels. Dr. Yokouchi explained that further investigation is needed to draw definitive conclusions.
45. Another participant from Chinese Taipei inquired about what accounts for a higher proportion of estuary residents in the higher altitude areas. Dr. Yokouchi explained that eels may avoid cold waters and favor suitable productive environments, which are often estuaries rather than rivers at higher altitudes.
46. A participant from Japan posed a question on how residents and habitat shifters had been classified. Dr. Yokouchi answered that a clear difference in Sr/Ca ratio profiles can be found in otoliths, allowing researchers to distinguish between the two types of eels.

Item 8: Scientific advice for conservation and management measures for the Japanese eel and other relevant eels

(1) Species identification guidelines for glass eels

47. The Secretariat provided the following explanations: (1) During last year's Informal Consultation, Japan proposed the development of species identification guidelines for glass eels. Members agreed that the continuation of the discussion on Japan's proposal intersessionally and in the future Scientific Meeting and the Informal Consultation; (2) Throughout the intersessional period, the Task Team 1 worked on drafting the guidelines.
48. The Secretariat also announced that Japan had submitted proposed revisions to the draft guidelines on the first day of the 4th Scientific Meeting. The Secretariat clarified that the revisions involve only the removal of sections unrelated to the morphological identification of glass eels.
49. Dr. Huỳnh Quang Thiện (co-author of the guidelines) then introduced the draft guidelines (SM04 Doc.17 rev1).
50. A delegation from Japan proposed that the primary focus of discussions remain on the morphological identification of glass eels. It recommended that the Task Team 1 address topics unrelated to species identification, namely eel fisheries, only if necessary. Japan also proposed to adopt the revised guidelines in the Scientific Meeting and endorsed in the Informal Consultation. Additionally, a delegation from Japan encouraged the Task Teams to continue refining the guidelines, including the incorporation of more detailed contents such as species-specific characteristics and other relevant information, if needed.
51. A delegation from Chinese Taipei proposed including the information of total length by species to assist species identification.
52. Prof. Hiroshi Hakoyama (co-author) explained the intention of including fisheries information, stating that such information would provide background information to help identify eel species. In addition, Dr. Leanne Faulks (co-author) suggested seeking feedback from customs officers to help improve the guidelines.
53. A participant from Japan noted that some Japanese glass eels have faint pigmentation on their caudal fins.
54. A participant from Korea suggested that it is desirable to compare with morphological and DNA analysis among glass eel species to support the morphological guidelines. In response, Dr. Thiện explained that the guidelines had been designed to be practical for the customs where facilities of DNA analyses may not be available.
55. Prof. Hakoyama (co-author) requested clarification on target readers of the guidelines. The Secretariat responded that while target readers may not be limited to customs officers, but further discussion may be required in the Scientific Meeting and the Informal Consultation. The Members agreed to submit the guidelines to the Informal Consultation for its consideration (Attachment I). They also agreed that further improvement and refinement of the guidelines may be required and that they would request clear guidance from the Informal Consultation on the purpose of the guidelines.

(2) Definitions for the different eel life stages

56. The Secretariat introduced the trade term code of *A. Anguilla* in the guidelines for the preparation and submission of CITES annual reports (SM04 Doc.18).
57. Dr. Fukuda then presented a summary of *Evaluation of the pigmentation stages and body proportions from the glass eel* (SM04 Doc.19).
58. A delegation from Japan requested clarification on the target species being considered in the discussion on definitions for eel life stages. The Secretariat responded that the focus was specifically on Japanese eels. A participant from Japan further proposed using body weight as an additional criterion for identifying life stages. Dr. Fukuda supported this suggestion and stated that he would explore the use of body weight in further detail.
59. There was a general agreement among scientists on the common understanding of the different eel life stages of Japanese eel particularly between elver and yellow eels.

(3) Initial input of glass eels and eel fries into aquaculture ponds

60. The Secretariat explained that the upper limit for glass eel inputs into aquaculture ponds during the 2014–2015 season had been set at 80% of the input volume recorded in the 2013–2014 season. It further noted that this limit has remained unchanged for the past decade due to a lack of scientific evidence supporting any revision.
61. A participant from Japan proposed that the Scientific Meeting provide advice to the Informal Consultation on setting a new limit for glass eel inputs into aquaculture ponds, based on scientific evidence in the future meeting.

(4) Other matters

62. The participants raised no further matters.

Item 9: Revised workplan of scientific activities/collaboration in 2025-2026

63. The Task Team leader, Dr. Leanne Faulks, introduced the draft workplan of scientific activities/collaboration (SM04 Doc. 20 and 21).
64. The Members agreed that the Task Teams would proceed as suggested in the workplan.
65. The Secretariat introduced the draft revised Terms of Reference (ToR) of the Task Teams (Attachment II).
66. The Members agreed that instead of omitting names of the Task Team leaders from the ToR, their names are added to the document of the workplan (Attachment III).

Item 10: Date and venue of the next Scientific Meeting

67. The Secretariat explained that the dates for the next Scientific Meeting will be discussed in this coming Informal Consultation.

68. The Secretariat asked participants what kind of experts need to be invited for the next Scientific Meeting. A participant from Japan proposed to invite Dr. Kim Friedman from the FAO as a guest speaker. The Members expressed no objection to this proposal

Item 11: Other matters

69. The participants raised no further matters.

Item 12: Adoption of the summary report of the meeting

70. The participants adopted the summary report of the Scientific Meeting with modifications.

Item 13: Closing of the meeting

71. The Chair expressed appreciation for the work by the Secretariat and interpreters and concluded the meeting.

Guidelines for the morphological identification of glass eels endemic to Asia and Oceania

Summary

Monitoring eel recruitment is crucial for understanding trends in population size and to ensure that there are a sufficient number of adults to sustain future generations. In this manual, we provide a practical guide for the morphological identification of eel species in Asia and Oceania, with a focus on species endemic to East Asia. The identification key is based on two external characters: the position of the dorsal fin and the pigmentation patterns on the caudal peduncle and caudal fin. This manual is intended to be useful for fishers and authorities to allow rapid, on-site classification in the field, especially for commercially important species.

Morphological species identification of glass eels

The following external characters will be used for species identification, as illustrated in Figure 1:

- Pigmentation on the caudal peduncle and caudal fin: Using this feature, eels can be sorted out into three groups: (1) no pigmentation on the caudal region, (2) pigmentation on the caudal peduncle (tail bud), (3) and pigmentation on the caudal fin (Tabeta et al. 1976, Reveillac et al. 2009, Leander et al. 2012, see Section 2.1).
- Position of dorsal fin origin relative to the anus: This character has been widely used in previous papers (Tesch 2003, Watanabe et al. 2004, Silfvergrip 2009, Leander et al. 2012) in the form of the ratio of the length from the dorsal fin origin to the anus (anodorsal or dorsoanal fin length; ADL) and the total length (TL). This character allows for the classification of eels into two groups: shortfin eels and longfin eels. And in some cases, it is also useful to differentiate the closely related species (see Section 2.1).

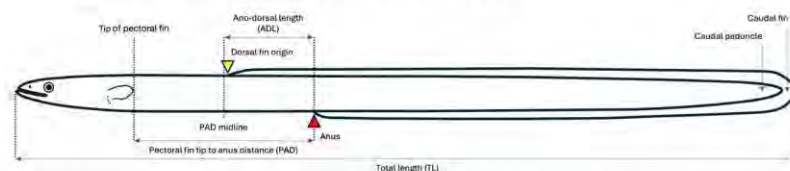


Figure 1. Terminology used for morphological identification of glass eels (after Nakabo (ed) 2002, Watanabe et al. 2004, Leander et al. 2012).

1) Identification of glass eels from the East Asia region (China, Japan, Republic of Korea and Chinese Taipei)

Several temperate and tropical eel species are distributed in East Asia and this region is an important area for eel trading worldwide, particularly for the Japanese eel (*A. japonica*). According to previous publications, three to four *Anguilla* species are known to occur in this area: *A. japonica*, the Indian shortfin eel (*Anguilla bicolor pacifica*), the giant mottled eel (*Anguilla marmorata*), and the Luzon mottled eel (*Anguilla luzonensis*). *Anguilla luzonensis* is rare in this area.

Herein, we provide identification keys for eel species in East Asia based on morphological characters.

Dichotomous key using caudal pigmentation (Figure 2):

- 1. Weak caudal pigmentation *A. japonica*
 Specific caudal pigmentation 2
- 2. Pigmentation on caudal peduncle (tail bud) *A. marmorata* or *A. luzonensis*
 Pigmentation on caudal fin *A. bicolor pacifica*

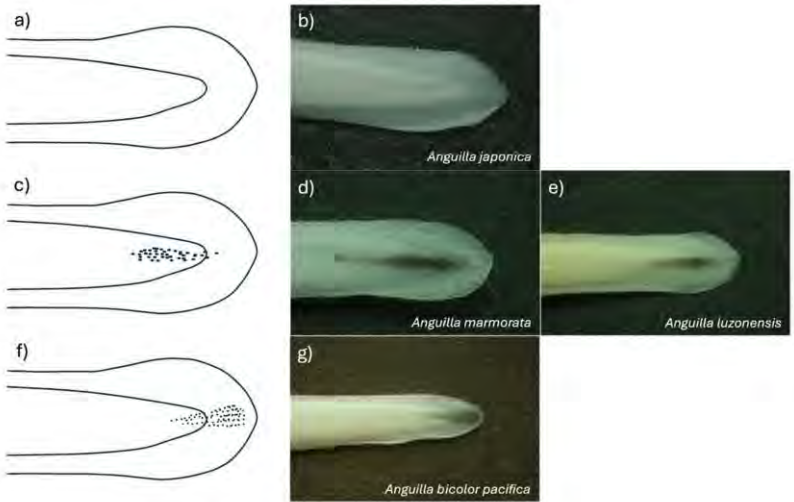


Figure 2. Illustration showing differences in caudal pigmentation among eel species in Japan: a-b) *Anguilla japonica*,

c-d-e) *A. marmorata* and/or *A. luzonensis*, and f-g) *A. bicolor pacifica* (after Tabeta et al 1976, Leander et al. 2012).

Photos by Yu-San Han.

Dichotomous key using position of dorsal fin origin (Figure 3):

1. Short-finned eel; dorsal fin origin located just above the anus *A. bicolor pacifica*
 Long-finned eel; dorsal fin origin located anterior to the anal fin 2
2. Dorsal fin origin located at or posterior to the midpoint between the tip of the pectoral fin and the anus *A. japonica* or *A. luzonensis*
 Dorsal fin origin located anterior to the midpoint between the tip of the pectoral fin and the anus *A. marmorata*

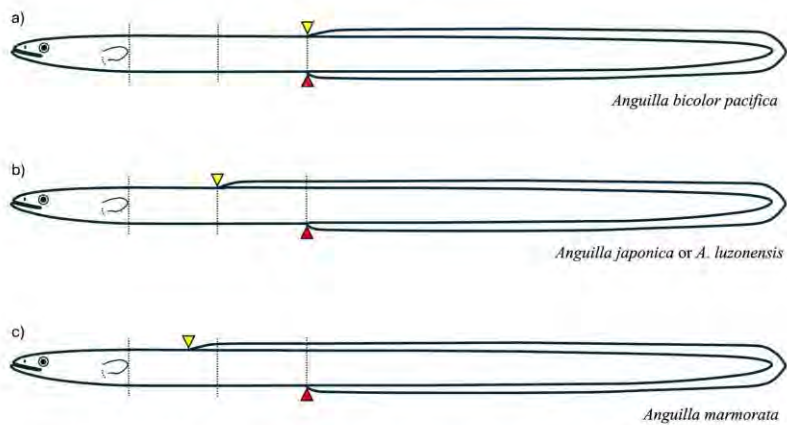


Figure 3. Illustration of differences in the positions of the dorsal fin origin among three eel species in Japan: a) *Anguilla bicolor pacifica*, b) *A. japonica* or *A. luzonensis*, and c) *A. marmorata*. Vertical dotted lines indicate (from left to right) the tip of the pectoral fin, the midpoint between the tip of the pectoral fin and the anus, and the anus. Yellow and red triangles indicate the positions of the dorsal fin origin and the anus, respectively (after Nakabo (ed.) 2002, Tesch 2003, Silfvergrip 2009).

To improve identification, it is recommended to use the above two keys in combination. For glass eels, the primary morphological character to observe is the pigmentation pattern on the caudal region, followed by the position of the dorsal fin origin.

Dichotomous key using both the position of the dorsal fin origin and caudal pigmentation (Figure 4):

1. Weak caudal pigmentation; dorsal fin origin located at or posterior to the midpoint between the tip of the pectoral fin and the anus *A. japonica*
 Caudal pigmentation present 2
2. Short-finned eel; dorsal fin origin located just above the anus; pigmentation present on the caudal fin tip *A. bicolor pacifica*
 Long-finned eel; dorsal fin origin located anterior to the anus, pigmentation on caudal peduncle (tail bud) 3
3. Dorsal fin origin located posterior to the midpoint between the tip of the pectoral fin and the anus *A. luzonensis*
 Dorsal fin origin located anterior to the midpoint between the tip of the pectoral fin and the anus *A. marmorata*

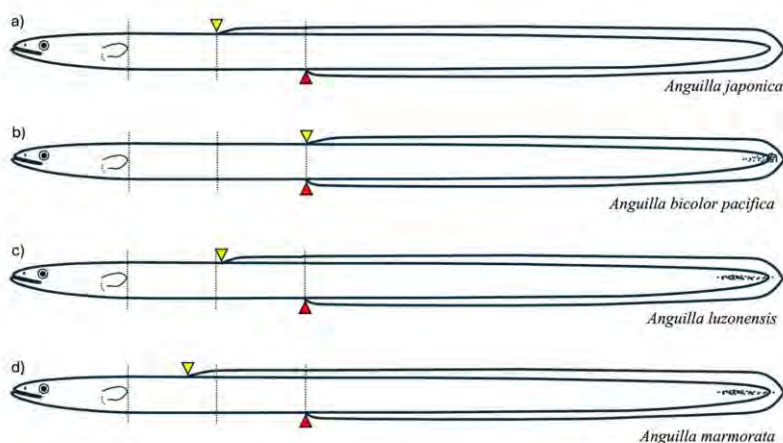


Figure 4. Illustration showing differences in the position of the dorsal fin origin and caudal pigmentation among eel species in Japan: a) *Anguilla japonica*, b) *A. bicolor pacifica*, c) *A. luzonensis*, and d) *A. marmorata*. Vertical dotted

lines indicate (from left to right) the tip of the pectoral fin, the midline between the tip of the pectoral fin and the anus, and the anus. Yellow and red triangles indicate the positions of the dorsal fin origin and the anus, respectively (after Tabeta et al 1976, Tesch 2003, Silfvergrip 2009, Nakabo (ed.) 2002, Leander et al. 2012).

2) Identification of glass eels from the Southeast Asia region (Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Thailand, and Vietnam)

Among the eight species/subspecies of *Anguilla* that are distributed in Southeast Asian countries, two species of shortfin eels (*Anguilla bicolor bicolor* and *A. bicolor pacifica*) and one species of longfin eel (*A. marmorata*) are of economic importance (SEAFDEC 2018). *Anguilla bicolor* and *A. marmorata* can be distinguished using the morphological identification keys provided above. However, it remains difficult to reliably distinguish between the two subspecies of *A. bicolor* based on either morphological characteristics or the currently available genetic information. Therefore, glass eel fisheries stakeholders are encouraged to use the keys where applicable, while acknowledging the limitations in subspecies-level identification for *A. bicolor*.

3) Identification of glass eels from the Oceania region (Australia, Fiji, and New Zealand)

Oceania is home to about nine species/subspecies of anguillid eels (Stuart et al. 2024) and they can be classified into two groups based on the position of the dorsal fin origin relative to the anal fin origin (i.e. shortfin and longfin eels). Additional external morphological characters, such as pigmentation patterns on the caudal region, can also be used for identification.

4) Morphological identification of glass eels of the species *Anguilla japonica*, *A. rostrata*, and *A. anguilla*

In international trade, *A. japonica*, *A. rostrata*, and *A. anguilla* glass eels are exported to various regions, making accurate identification essential, as the species are morphologically similar at this early life stage. Silfvergrip (2009) proposed a practical identification key for intact specimens smaller than 200 mm total length (TL). According to this key the distinguishing characteristic is the ratio of postanal length to the dorsoanal distance (the distance between the anus and the origin of the dorsal fin, see ADL in Figure 1).

Sample median ($N \geq 15$ recommended) of postanal length 5.6–6.0 times dorsoanal distance *A. dieffenbachii* or *A. japonica*
 Sample median ($N \geq 15$) of postanal length 5.0–5.2 times dorsoanal distance *A. anguilla*

However, there are no clear ways to distinguish *A. rostrata* glass eels using external morphological features (Silfvergrip 2009).

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**Terms of Reference
for Task Team 1 & 2 of Scientific Activities and Collaborative Research on Japanese
Eel Established under the Scientific Meeting**

The Bureau of Fisheries of People's Republic of China, the Fisheries Agency of Japan, the Ministry of Oceans and Fisheries of the Republic of Korea and the Fisheries Agency of Chinese Taipei (hereinafter referred to as "Members"),

Recalling the Joint Statement of the Bureau of Fisheries of People's Republic of China, the Fisheries Agency of Japan, the Ministry of Oceans and Fisheries of the Republic of Korea and the Fisheries Agency of Chinese Taipei on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species, which was issued in September 2014;

Recognizing the Joint Press Release of the Fourteenth Meeting of the Informal Consultation on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species (hereinafter referred to as "Informal Consultation"), which was released in July 2021;

Noting the paragraph 46 of the Summary Report of the 2nd Scientific Meeting on Japanese Eel and Other Relevant Eels held from 29th (Mon) to 30th (Tue) May, 2023 as well as the Terms of Reference for the Scientific Meeting on Japanese Eel and Other Relevant Eels and the rule 7 of the Basic Rules of Meeting Procedure for the Scientific Meeting;

Have decided the following:

PURPOSE

1. Task Teams are established under the Scientific Meeting on Japanese Eel and Other Relevant Eels for the efficient implementation of the tasks.
2. The Task Teams aim at promoting scientific activities and collaborative research on the Japanese eel to provide the best available scientific data and information to the Scientific

Meeting.

TERMS OF REFERENCE

3. The Task Teams focus on the following activities and research:
 - (1) Develop close relationships among scientists in the Northeast Asian-Pacific region and to collaborate on research and other activities (primarily on Japanese eel and also on other relevant eels) that will contribute to understanding and forecasting the stock trends of these species in the Northeast Asian-Pacific region, including: collecting/organizing long-term time-series data, collecting fishery-independent data such as environmental DNA, investigating the field sex-ratio of yellow and silver eels, and developing glass eel species identification guidelines (Task Team 1); and
 - (2) Exchange information and promote collaborative research on spawning migration tracking in order to track migration paths of Japanese eel and other relevant eels from rivers to spawning grounds in Northeast Asia and other regions, and analyze and evaluate tracking data (Task Team 2).
4. Each Task Team has a team leader who leads the team and carries out their duties via email correspondence or by hosting virtual or in-person meetings.
5. Each Member registers scientists/researchers as team members for the two task teams.
6. Team members work in coordination and cooperation with others to ensure the efficient execution of the team's mission.
7. The Task Teams prepare and present an interim report for each task team.

OTHERS

8. Subject to resource constraints, the Interim Secretariat of the Scientific Meeting shall provide support and guidance to the Task Teams.
9. Insofar as they are applicable, the Basic Rules of Meeting Procedure for the Scientific Meeting shall apply mutatis mutandis to the proceedings of the Task Teams.

**Workplan for Scientific Activities and Collaborative Research
on Japanese Eel and Other Relevant Eels (2025-26)**

Prepared by the Task Team leaders with support from the Secretariat

Task Team leaders, Assistant Professor Leanne Faulks, Tohoku University, Japan for Task Team 1 and Professor Hiroshi Hakoyama, Nagano University, Japan for Task Team 2, would like to propose the two intersessional tasks for the workplan for scientific activities and collaborative research as below.

Dates	Scientific Meeting/ Informal Consultation/ Task Teams 1 and 2	Works Contents
(2025) June	The 4 th scientific meeting	■ Discuss on the interim report of each task team ■ Draft an updated workplan
June	The 18 th meeting of the Informal Consultation	■ Authorize the latest statistics (catch, trade, input, etc) on eels submitted by Members ■ Approve the updated workplan
July - August	Task Teams 1 and 2	■ Register team members for each task team ■ Determine work plan and role assignments ■ Task Team 1

		- Review the available statistics - Improve collection of fisheries statistics and complementary data - Share and improve knowledge on model analysis - Discuss the potential use of eDNA surveys - Discuss the potential cooperation on research for environmental sex determination (differentiation): A new joint research theme "Investigating the sex ratio of yellow and silver eels in local habitats" has been proposed. Currently, discussions are underway with Prof. Yu-San HAN regarding the use and refinement of an RNA expression-based sex estimation method - Collaborative research on species identification of glass eels: A species identification manual for glass eels in Asia and Oceania is being developed. Task Team members have been invited to contribute country- or region-specific fisheries information to enhance the manual. - Development of agreed upon definitions for different eel life stages - Discuss/identify specific indicators/parameters for stock assessments or trend analysis of Japanese eel as the single stock in Northeast Asian region - Consider organizing practical training
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		workshops (e.g., on eDNA sampling and analysis) based on the proposal from Dr. Prasert Tongnunui. → The idea is to go beyond one-off workshops and establish hands-on training sessions, enabling Task Team members to apply methods in their countries and regions, with possible sample sharing to network labs - Others ■ Task Team 2 - Improve migration tracking survey techniques - Discuss field research plan in East Asian region and the Pacific region - Ongoing email discussions with Dr. Nur Indah Septiarni regarding potential cooperation.
August (2025)-March (2026)	Task Teams 1 and 2	■ Collaborative work based on the plan ■ The Task Team website will be launched as a platform for sharing updates and activities (https://eel-task-team.ifb-research.jp)
(2026) April-May	Task Teams 1 and 2	■ Online workshop/discussion for the Task Teams 1 and 2 / An interim report for the task

May-June	The 5 th Scientific Meeting	■ Discuss on the interim report of each task team ■ Discuss on the progress of species identification guideline for glass eel and definitions for the different eel life stages ■ Draft an updated workplan
May-June	The 19 th meeting of the Informal Consultation	■ Authorize the latest statistics (catch, trade, input, etc) on eels submitted by Members ■ Approve the species identification guideline for glass eel and definitions for the different eel life stages, if possible ■ Approve the draft updated workplan

附件 21 第 18 屆鰻魚國際非正式會議議程草案

IC18 Doc.02rev1

(Draft)

The Eighteenth Meeting of the Informal Consultation on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species (Informal Consultation)

**Venue: Hamamatsu, Japan
June 19-20, 2025**

Annotated agenda

**June 19, Thursday
10:30 – 18:30 JST**

- 1. Opening of the meeting (IC18 Doc.03) [20 mins]**
 - *The Chair will welcome the participants and open the 18th Meeting of the Informal Consultation.*
 - *A delegate of Japan as the host country will deliver a short opening statement.*
 - *The Chair will introduce the participants list and invite the heads of delegations to introduce their delegation members.*
- 2. Meeting arrangement (IC18 Doc. 04 and 05) [5 mins]**
 - *The interim Secretariat (Secretariat) will explain meeting arrangements.*
- 3. Adoption of agenda (IC18 Doc.01 and 02) [5 mins]**
 - *The Chair will recall that a draft agenda was developed by the Secretariat in consultation with the Chair and circulated to the Participants on March ○○, 2025.*
 - *The meeting will be invited to adopt its meeting agenda.*
- 4. Opening statements (IC18 Doc.06-09) [15 mins]**
 - *All Members of the Informal Consultation except the host country will be invited to deliver short statements (5 minutes for each). The written statements will be attached to the Summary Report.*
- 5. Adoption of rules of procedure (IC18 Doc.10) [15 mins]**
 - *As per paragraph 5 of IC17 Report, Japan will propose deleting “tentative” from the documents “Tentative Basic Rules of Meeting Procedure” for the Informal Consultation and formally adopt it as the permanent Rules of Procedures .*
 - *Participants will be invited to discuss Japan’s proposal.*

6. Report from the 4th Scientific Meeting on Japanese Eel and Other Relevant Eels
(IC18 Doc.11) [30 mins]

- The Chair of the 4th Scientific Meeting on Japanese Eel and Other Relevant Eels (Scientific Meeting) will explain the summary report of the 4th Scientific Meeting held in Hamamatsu, Japan, from June 16 to June 17, 2025, including "Updated Workplan for Scientific Activities and Collaborative Research on the Japanese Eel and Other Relevant Eels (2025-2026)".
- Participants will be invited to review the report and provide comments as necessary, and then endorse it.

7. Report from the 4th Meeting of Alliance for Sustainable Eel Aquaculture (ASEA)
(IC18 Doc.12) [30 mins]

- The Secretariat will provide the information on the 4th Meeting of ASEA.
- Participants will be invited to provide comments as necessary.

Lunch break [90 min]

14:00 – 18:30 JST

8. Review of the updated eel statistics including the 2024-2025 season (IC18 Doc.13)
[30 mins]

- The Secretariat will explain the updated "Eel statistics about catch and input of glass eels and trade of any stages of eels" including the 2024-2025 season.
- Participants will be invited to review it and provide comments as necessary.

9. Conservation and management measures for eels [60 mins]

- The Secretariat will explain the updated "Summary Table of Conservation and Management Measures for Eels" (IC18 Doc.14).
- Participants will be invited to review updated information on their domestic conservation and management measures for eels and provide comments as necessary.
- In addition, participants will be invited to discuss measures on input of glass eel into aquaculture ponds in accordance with the Joint Statement (IC18 Inf.01).

Coffee break [30min]

10. Discussion on the Japanese eel and other relevant eels at the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (IC18 Doc.15 and Doc.16) [80 mins]

10.1 Basic information of the CITES

- Japan will make a presentation on the basic information of the CITES.

10.2 Thirty-third meeting of the Animals Committee and seventy-eighth meeting of the Standing Committee

- Japan will make a presentation on the recent discussions on the Japanese eel and other relevant eels at the CITES.
- Participants will be invited to exchange views and information on Japan's presentation.

10.3 Listing proposal of *Anguilla* spp. (eels) to CITES Appendix II for CoP20

- Japan will make a presentation on consideration of listing proposal of *Anguilla* spp. (eels) to Appendix II for CITES CoP20 by EU.
- Participants will be invited to exchange views and information on Japan's presentation.

10.4 Export procedure including Legal Acquisition Findings (LAF) and Non Detriment Findings (NDF)

- Japan will make a presentation on exporting procedure in accordance with CITES including LAF and NDF.
- Participants will be invited to exchange views and information on Japan's presentation.

10.5 Concerted actions when Japanese eel is listed in the Appendix II

- Participants will be invited to discuss the concerted action in the case where the Japanese eel is included in the Appendix II.

10.6 Strategy toward CoP20

- Japan will propose a draft statement of the Informal Consultation to CITES COP20.
- Participants will be invited to discuss and provide comments on the draft statement as necessary, and then agree to submit it to the COP20.
- Participants will also be invited to discuss the possible strategy toward CoP20.

11. **Consideration of the possible establishment of an international legal framework for eels (IC18 Doc.17) [30 mins]**

- Japan will present consideration points for the establishment of a legally binding framework for eels.
- Participants will be invited to exchange views on Japan's presentation.

12. **Workplan in 2025-2026 (IC18 Doc.18) [20 mins]**

- Participants will be invited to revise the workplan considering the outcomes of discussion in each agenda item and then adopt it.

13. **Date and venue of the next Scientific Meeting and Informal Consultation [10 mins]**

- Participants will be invited to discuss the date and the venue of the 5th Scientific Meeting and the 19th Meeting of the Informal Consultation.

16. **Other matters [10 mins]**

- Any other matters not raised in the meeting will be discussed, if proposed.

Welcome Dinner hosted by Fisheries Agency of Japan

Date & Time: June 19, 19:30-21:00 (Room is open from 19:00)
Venue: Hotel Crown Palais Hamamatsu (4th Floor, room “芙蓉 Fuyou”)

June 20, Friday

10:30 – 14:30 (JST)

14. Finalization of the joint press release (IC18 Doc.19) [60 mins]

- *Participants will be invited to discuss and finalize a joint press release, including “Eel Statistics about catch and input of glass eels and trade of any stages of eels” and “Summary Table of Conservation and Management Measures for Eels”.*

Lunch break [90 min]

13:00 – 14:30 JST

15. Adoption of summary report [80 mins]

- *Participants will be invited to discuss a draft summary report of the meeting prepared by the Secretariat in consultation with the Chair for its adoption.*

17. Closing of the meeting [10 mins]

- *The Chair will close the meeting.*

附件 22 第 18 屆鰻魚國際非正式會議出席名單

The Eighteenth Meeting of the Informal Consultation
on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species
Participants List

IC18 Doc.03

【Chair】

Category	Title	First name	SURNAME	Position	Organization	Participation in the excursion	E-mail
1 Chair	Dr.	Joji	Morishita	Adviser to the Minister of Agriculture, Forestry and Fisheries	Ministry of Agriculture, Forestry and Fisheries of Japan	☐	-

China

Category	Title	First name	SURNAME	Position	Organization	Participation in the excursion	E-mail
1 Member	Mr.	Keji	JIANG	Professor	East China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences	☒	jiangkj@ccs.ac.cn
2 Member	Mr.	Xuezhou	CHEN	Vice Chairman	China Eel Industrial Association	☐	
3 Member	Mr.	Jiaolin	ZHANG	Vice President	Fujian Tianma Science And Technology Group Co., Ltd	☐	
4 Member	Ms.	Lu	FANG		Interpreter	☒	fanglunma@163.com

Japan

Category	Title	First name	SURNAME	Position	Organization	Participation in the excursion	E-mail
1 Member	Mr.	Takaaki	Sakamoto	Director of Ecosystem Conservation Office	Fisheries Agency of Japan	☐	takaaki_sakamoto730@mailf.co.jp
2 Member	Mr.	Taiki	OGAWA	Assistant Director, Ecosystem Conservation Office	Fisheries Agency of Japan (Co-Secretariat)	☒	taiki_ogawa670@mailf.co.jp
3 Member	Mr.	Kyutaro	Yasumoto	International liaison officer, Ecosystem Conservation Office	Fisheries Agency of Japan	☒	kyutaro_yasumoto890@mailf.co.jp
4 Member	Mr.	Horoshi	Tsukamoto	Officer, Ecosystem Conservation Office	Fisheries Agency of Japan (Co-Secretariat)	☒	horoshi_tsukamoto810@mailf.co.jp
5 Member	Mr.	Toshihito	Horibata	Assistant Director, Inland Water Fishery Promotion Office	Fisheries Agency of Japan	☒	toshihito_horibata530@mailf.co.jp
6 Member	Prof.	Nobuyuki	Yagi	Professor	Tokyo University	☒	yagi@ecc.u-tokyo.ac.jp
7 Member	Ms.	Yasuko	Kyo	Deputy Director	Fishery division, Ministry of Foreign Affairs	☒	yasuko.kyo@mofa.go.jp
8 Member	Mr.	Taku	Nakamura	Deputy Director, Agricultural and Marine Products office	Ministry of Economy, Trade and Industry	☒	nakamura-taku@meti.go.jp
9 Observer	Mr.	Akihiro	Mae	Director	Global Guardian Trust (Co-Secretariat)	☒	mae@get.or.jp
10 Observer	Dr.	Iwao	Fujii	Sustainable Society Design Unit	Global Guardian Trust (Co-Secretariat)	☐	fujii-iwao@janus.co.jp
11 Observer	Mr.	Masaki	Hoshina	President	All Japan Association for Sustainable Eel Aquaculture Incorporated	☐	
12 Observer	Mr.	Hidaki	Yoshitomi	Secretariat	All Japan Association for Sustainable Eel Aquaculture Incorporated	☒	yoshitomi@unagi-nichumanren.or.jp
13 Observer	Mr.	Junpei	Izuno	Secretariat	All Japan Association for Sustainable Eel Aquaculture Incorporated	☒	izuno@unagi-nichumanren.or.jp
14 Observer	Ms.	Yuki	Shimizu	staff	Japan NUS CO.,LTD. (Co-Secretariat)	☒	shimizu-yk@janus.co.jp

Korea

Category	Title	First name	SURNAME	Position	Organization	Participation in the excursion	E-mail
1 Member	Mr.	YoungMin	Kim	Senior Deputy Director	Ministry of Oceans and Fisheries	☒	yagm@korea.kr
2 Member	Ms.	Jiyoung	Oh	Deputy Director	Ministry of Oceans and Fisheries	☐	im500@korea.kr
3 Member	Dr.	KyungMi	Won	Senior Researcher of Aquaculture Research Division	National Institute of Fisheries Science, Ministry of Oceans and Fisheries	☒	kyungmiwon@korea.kr
4 Member	Dr.	Hyeongsu	Kim	Researcher of Aquaculture Research Division	National Institute of Fisheries Science, Ministry of Oceans and Fisheries	☒	kim520@korea.kr
5 Member	Dr.	KyungMi	Jung	Researcher of Coastal Water Fisheries Resource Research Division	National Institute of Fisheries Science, Ministry of Oceans and Fisheries	☒	kyungmijung@korea.kr
6 Member	Ms.	Sueng Eun	Lee	Policy Analyst	Korea Overseas Fisheries Cooperation Center	☐	slee492@kofcc.org
7 Observer	Mr.	Seongsoo	Son	Standing Vice Chairman	Korea Fresh Water Eel Producer Association	☐	korecf2009@daum.net
8 Observer	Mr.	Sung Hyun	Lee	Association President	Freshwater Eel Culture Fisheries Cooperative	☒	esx857@shhyun.co.kr
9 Observer	Mr.	KioMan	Oh	Association Member	Freshwater Eel Culture Fisheries Cooperative	☒	esx857@shhyun.co.kr
10 Observer	Mr.	Eun Young	Baek	Team Leader	KOREA MARITIME INSTITUTE	☒	eybaek@kmi.re.kr
11 Observer	MS.	Minji	Park	Senior Researcher	KOREA MARITIME INSTITUTE	☐	mm04214@kmi.re.kr

Chinese Taipei

	Category	Title	First name	SURNAME	Position	Organization		E-mail
1	Member	Ms.	YouHua	Cheng	Section Chief, Aquaculture Fisheries Assistance section	Fisheries Agency	☒	youthua@msl.fh.gov.tw
2	Member	Mr.	Chiachi	Fu	CEO	Overseas Fisheries Development Council of the Republic of China	☒	roserph@ofdc.org.tw
3	Member	Ms.	WenHsin	Liu	Associate Specialist, Aquaculture Fisheries Assistance section	Fisheries Agency	☒	wenhsin0225@msl.fh.gov.tw
4	Member	Mr.	WeiHsiang	Chang	Section chief, Resource Management section	Fisheries Agency	☒	weihsiang@msl.fh.gov.tw
5	Member	Mr.	HsinMing	YEH	Chairman	Taiwan Ed Farming Industry Development Foundation	☒	hmyeh@mail.tfrin.gov.tw
6	Member	Mr.	ChiehFu	Wang	CEO	Taiwan Ed Farming Industry Development Foundation	☒	a27075603@hotmail.com
7	Member	Dr.	YuSan	Han	Professor&Director, Institute of Fisheries Science	National Taiwan University	☒	yshan@ntu.edu.tw
8	Member	Dr.	ChingHsiun	Ho	Associate Professor	National Kaohsiung University of Science and Technology	☒	CCHO@nku.edu.tw

附件 23 第 18 屆鰻魚國際非正式會議臨時議事基本規則

IC18 Doc.04

Tentative Basic Rules of Meeting Procedure for the Informal Consultation on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species (Informal Consultation)

This document has been prepared by the interim Secretariat of the 18th Meeting of the Informal Consultation.

Meeting language

Rule 1

The working language of the meeting shall be English. Meeting documents shall be submitted to the meeting in English.

Meeting format

Rule 2

The meeting may be held in-person/online, considering various situations.

Meeting participants

Rule 3

1. Each Member country/region of the Informal Consultation has their entitlement to appoint government officials, scientists, researchers and experts/specialists to participate in the meeting as **“Members”**.
2. Japanese eel fisher, Japanese eel farmers, other relevant industry people, members of Alliance for Sustainable Eel Aquaculture” (ASEA), NGOs and other organizations authorized by each Member country/region may be allowed to participate in the meeting as **“Observers”**.

Officers and Secretariat

Rule 4

1. The meeting shall elect its Chair/Co-Chair.
2. The Chair/Co-Chair shall preside in the meeting to adopt a meeting agenda and facilitate endorsement of a summary report prepared by an interim Secretariat.
3. A Member country/region that hosts the meeting shall service and act as an interim Secretariat for the meeting.

Arrangement of the meeting

Rule 5

1. The meeting shall be called at the request of the Chair/Co-Chair or of a simple majority of the Members.
2. The time and place of the meeting shall be determined by the Chair/Co-Chair and the interim Secretariat, in consultation with the Members.
3. Notice of an in-person meeting shall normally be given by the interim Secretariat at least 60 days in advance of the meeting. In case of an online or an e-mail meeting, notice should be given with enough time in advance of the meeting so that members could adequately prepare for the meeting.

Rules of order and debate

Rule 6

1. All participants (Members and Observers) shall be allowed to speak in the meeting in accordance with the Chair's/Co-Chair's presidency.
2. The Chair/Co-Chair shall, as a general rule, call upon speakers in the order "Members" and "Observers" in which they signify their desire to speak and shall give an order of precedence to the participants of the meeting.
3. However, the Chair/Co-Chair may depart from this general rule and call on speakers in the order that he/she judges appropriate to ensure the timely progress of the debate.
4. The meeting shall take decisions by consensus.

Working groups

Rule 7

1. The meeting may establish such in-session and intersessional working groups as may be necessary for the meeting to carry out its purposes. Intersessional working groups shall normally work electronically unless the Informal Consultation determines otherwise.
2. For each working group, the Informal Consultation shall define the terms of reference.
3. Subject to resource constraints, the interim Secretariat shall provide support and guidance to intersessional working groups.
4. Insofar as they are applicable, these Rules shall apply mutatis mutandis to the proceedings of working groups.

Summary report

Rule 8

A concise summary report of the decisions of the meeting shall be prepared by the interim Secretariat for endorsement by the meeting before the closure of the meeting or after the meeting electronically.

Final Provisions

Rule 9

1. Matters not covered by the Tentative Basic Rules may be treated in consultation with the Members and in accordance with the Chair's/Co-Chair's presidency.
2. The Tentative Basic Rule shall be occasionally reviewed, according to circumstances.

附件 24 第 18 屆鰻魚國際非正式會議文件列表

(Attachment II)

List of Meeting Documents

Document Number	Title
IC18 Doc.01	Agenda of the eighteenth meeting of the informal consultation
IC18 Doc.02 rev1	Annotated agenda with timeline of the Eighteenth meeting of the informal consultation
IC18 Doc.03	Participants list
IC18 Doc.04	Tentative basic rules of meeting procedure for the informal consultation
IC18 Doc.05	Information note for participants
IC18 Doc.06	Opening statement by China
IC18 Doc.07	Opening statement by Japan
IC18 Doc.08	Opening statement by Korea
IC18 Doc.09	Opening statement by Chinese Taipei
IC18 Doc.10	Draft basic rules of meeting procedure for the informal consultation
IC18 Doc.11	Summary report of the 4 th scientific meeting on Japanese eel and other relevant eels
IC18 Doc.12	Summary report of the 4th meeting of Alliance for Sustainable Eel Aquaculture (ASEA)
IC18 Doc.13	Updated eel statistics including the 2024-2025 season
IC18 Doc.14	Summary table of conservation and management measures for eels
IC18 Doc.15	Discussion on the Japanese eel and other relevant eels at the Convention on International Trade in Endangered Species of Wild Fauna and Flora
IC18 Doc.16	Draft statement of the Informal Consultation to CITES COP20
IC18 Doc.17	Consideration of the possible establishment of an international / regional legal framework for eels
IC18 Doc.18	Draft work plan for the informal consultation (2025-2026 season)
IC18 Doc.19	Draft joint press release
IC18 Inf.01	Joint statement of the Bureau of Fisheries of People's Republic of China, the Fisheries Agency of Japan, the Ministry of Oceans and Fisheries of the Republic of Korea and the Fisheries Agency of Chinese Taipei on international cooperation for conservation and management of Japanese eel stock and other relevant eel species
IC18 Inf.02	Summary report of the 17th meeting of informal consultation on international cooperation for conservation and management of Japanese eel stock and other relevant eel species
IC18 Inf.03	Summary record of the 33 rd meeting of the CITES Animals Committee
IC18 Inf.04	Meeting document on eels (<i>Anguilla spp.</i>) at the 33 rd meeting of the CITES Animals Committee (CITES-AC33 Doc. 40)
IC18 Inf.05	Summary record of the 78 th meeting of the CITES Standing Committee
IC18 Inf.06	Meeting document on eels (<i>Anguilla spp.</i>) at the 78 th meeting of the CITES Standing Committee (CITES-SC78 Doc.69.1 and Doc. 69.2)
IC18 Inf.07	Draft Resolution on Trade, Conservation and Management of Anguillid Eel Species (<i>Anguilla spp.</i>)
IC18 Inf.08	Conf. 18.7 (Rev. CoP19) Legal Acquisition Findings
IC18 Inf.09	Conf. 16.7 (Rev. CoP17) Non-detrimental findings
IC18 Inf.10	CITES NDF Guidance
IC18 Inf.11	Japan's draft NDF for the Japanese eel (<i>Anguilla japonica</i>)

附件 25 各國開幕致詞

IC18 Doc.07

OPENING REMARKS

BY
JAPAN
AT

THE EIGHTEENTH MEETING OF THE INFORMAL CONSULTATION ON
INTERNATIONAL COOPERATION FOR CONSERVATION AND
MANAGEMENT OF THE JAPANESE EEL STOCK AND OTHER
RELEVANT EEL SPECIES OF 19th-20th JUNE 2025

It is my great pleasure to be here today to host the 18th Meeting of the Informal Consultation on International Cooperation for Conservation and Management of the Japanese Eel Stock and Other Relevant Eel Species.

I cordially welcome all the representatives of Members of Northeast Asian region to this meeting.

Japan recalls that the four Members have been called upon to take responsible actions for the sustainable use of valuable Japanese eel resource and continued discussion for international cooperation for conservation and management of not only the Japanese eel but also other relevant eel species. It is reminded that a decade has already passed since the initial input of glass eels and eel fries was first adopted for the 2014-2015 input season. We recognize that the sustainable use of this species is our common mission. Our common mission is achievable solely through cooperation and collaboration among Members of the Northeast Asian region.

However, regardless of our sincere and concerted effort for conservation and management of eel resources, there may be undesirable deliberation in CITES CoP20 this year. There is a possibility to have a listing proposal of all *Anguilla* species in Appendix II. The proposal is currently under consideration by EU and its Member States. Japan believes that listing all *Anguilla* species without convincing rationale, will not only undermine our effort for conservation and management of eel resources but also potentially cause serious implication such as increased malicious poaching and smuggling as well as irreparable damage on the livelihoods of fishers/farmers and local communities. Our coordinated action is critically important.

With this in mind, we look forward to discussing the management of the Japanese eel and our cooperation towards CITES CoP 20 and post-CITES CoP20 with the participants in this meeting. I hope that we will have constructive and candid exchange of views.

Thank you again for your participation and cooperation.

Mr. Chair, Distinguished delegates,

First, I would like to express our sincere gratitude to the Government of Japan for hosting the 18th Informal Consultation on Japanese Eels.

I am pleased to participate in this consultation held in Hamamatsu, the city of beautiful music, and I would like to thank the secretariat for their efforts in preparing for this meeting.

Eels are of great interest worldwide due to the decline in their populations. At the CITES Standing Committee in November 2023, a working group was established to address all *Anguilla* species, including *Anguilla japonica*. As a result, the listing of *Anguilla* species in the CITES Appendices will be discussed at the 20th Conference of the Parties in November 2025.

The Republic of Korea recognizes that the outcome of these discussions will have a significant impact on all *Anguilla* species in the future. This is a time that requires careful attention.

Eels possess both cultural and industrial value throughout East Asia, particularly for the parties participating in today's consultation. Therefore, it is important that East Asian countries make their utmost efforts toward independent eel conservation and management through international cooperation.

I appreciate all parties engaging in discussions on conservation and management methods for eels through this informal consultation, based on international cooperation, and contributing to the conservation and management of eels.

I hope we have practical and constructive discussions for the management of eel stocks this year. Thank you.

Dear Chair and distinguished attendees,

Good morning!

It is truly wonderful to see you all again after a year! We sincerely thank Japan for the thoughtful planning and arrangements, making it possible for us to visit one of the key eel farming regions here. The arranged on-site visit is highly rewarding and has set a strong foundation for the successful commencement of the 18th informal meeting today.

On behalf of our team, I would like to express our heartfelt gratitude.

Firstly, congratulations to all members on achieving a long-awaited and abundant harvest this fishing season. This clearly reflects positive feedback from nature in response to years of conservation and management measures implemented by all members. Nevertheless, we continue to uphold the commitments made in the Joint Statement at the 7th Informal Meeting in 2014, adhering strictly to the jointly agreed upper limit of input and continuing our efforts toward the sustainable use of eel resources.

However, while we are celebrating this fruitful season, it is said that the European Union is considering tabling a proposal for listing the entire *Anguilla* genus — including the Japanese eel — under the CITES appendices at the CITES Conference of the Parties this year, due to mismanagement of the European eel. Submitting a proposal lacking scientific justification is unreasonable and poses a potential threat to the eel industry.

Considering this, we are currently planning to establish a traceability system for glass eels, responding to the industry's expectations. Our goal is to promote a transparent and traceable supply chain from capture to farming, thereby improving our understanding of the abundance of the domestic eel resource.

As Japanese glass eels are a shared natural resource across the four members, the challenge we collectively face is how to ensure ecological sustainability while maintaining stable development.

Therefore, we hope to build strong partnerships with all members present at this informal meeting. Together, we aim to develop interconnected traceability systems for glass eels and establish a

transparent and accountable catch traceability framework. We also seek to strengthen scientific collaboration among four members to jointly build a solid foundation of scientific evidence or information that can:

1. Support lobbying at appropriate international forums to prevent the inclusion of Japanese eel under the CITES appendices; and
2. If Japanese eel were to be listed, members would be allowed to provide the necessary documentation, such as Legal Acquisition Findings (LAF) and Non-Detriment Findings (NDF), to ensure the continued legal and smooth trade of eel resources in the region.

Finally, I hope that in the next two days, we can all share our views openly, work together to address our shared concerns, and explore efficient and effective solutions to mitigate the crisis that might be raised at the CITES Conference at the end of November.

Wishing this 18th Informal Meeting a successful and fruitful conclusion.

附件 26 第 18 屆鰻魚國際非正式會議議事基本規則

IC18 Doc.10

Tentative Basic Rules of Meeting Procedure for the Informal Consultation on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species (Informal Consultation)

~~This document has been prepared by the interim Secretariat of the 18th Meeting of the Informal Consultation.~~

Meeting language

Rule 1

The working language of the meeting shall be English. Meeting documents shall be submitted to the meeting in English.

Meeting format

Rule 2

The meeting may be held in-person/online, considering various situations.

Meeting participants

Rule 3

1. Each Member country/region of the Informal Consultation has their entitlement to appoint government officials, scientists, researchers and experts/specialists to participate in the meeting as **“Members”**.
2. Japanese eel fisher, Japanese eel farmers, other relevant industry people, members of Alliance for Sustainable Eel Aquaculture” (ASEA), NGOs and other organizations authorized by each Member country/region may be allowed to participate in the meeting as **“Observers”**.

Officers and Secretariat

Rule 4

1. The meeting shall elect its Chair/Co-Chair.
2. The Chair/Co-Chair shall preside in the meeting to adopt a meeting agenda and facilitate endorsement of a summary report prepared by an interim Secretariat.
3. A Member country/region that hosts the meeting shall service and act as an interim Secretariat for the meeting.

Arrangement of the meeting

Rule 5

1. The meeting shall be called at the request of the Chair/Co-Chair or of a simple majority of the Members.
2. The time and place of the meeting shall be determined by the Chair/Co-Chair and the interim Secretariat, in consultation with the Members.
3. Notice of an in-person meeting shall normally be given by the interim Secretariat at least 60 days in advance of the meeting. In case of an online or an e-mail meeting, notice should be given with enough time in advance of the meeting so that members could adequately prepare for the meeting.

Rules of order and debate

Rule 6

1. All participants (Members and Observers) shall be allowed to speak in the meeting in accordance with the Chair's/Co-Chair's presidency.
2. The Chair/Co-Chair shall, as a general rule, call upon speakers in the order "Members" and "Observers" in which they signify their desire to speak and shall give an order of precedence to the participants of the meeting.
3. However, the Chair/Co-Chair may depart from this general rule and call on speakers in the order that he/she judges appropriate to ensure the timely progress of the debate.
4. The meeting shall take decisions by consensus.

Working groups

Rule 7

1. The meeting may establish such in-session and intersessional working groups as may be necessary for the meeting to carry out its purposes. Intersessional working groups shall normally work electronically unless the Informal Consultation determines otherwise.
2. For each working group, the Informal Consultation shall define the terms of reference.
3. Subject to resource constraints, the interim Secretariat shall provide support and guidance to intersessional working groups.
4. Insofar as they are applicable, these Rules shall apply mutatis mutandis to the proceedings of working groups.

Summary report

Rule 8

A concise summary report of the decisions of the meeting shall be prepared by the interim Secretariat for endorsement by the meeting before the closure of the meeting or after the meeting electronically.

Final Provisions

Rule 9

1. Matters not covered by the ~~Tentative~~ Basic Rules may be treated in consultation with the Members and in accordance with the Chair's/Co-Chair's presidency.
2. The ~~Tentative~~ Basic Rule shall be occasionally reviewed, according to circumstances.

附件 27 各國 2024-2025 年漁季鰻魚（含鰻苗）之捕撈、養殖和貿易統計數據

【Revised Standard Working Formats for Eel Statistics (2025)】

Members: China (To be submitted)

Format 1: Data on Catch of Japanese Eel (Data is limited to taken from the wild)

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Catch of glass eel	kg	28000.0	19500.0	55000.0	20500.0	21000.0	26500.0	16000.0	14500.0	50000.0	38000.0	29500.0	40450.0	24,300.0
Catch of eel fry (kuroko)	kg											-	-	
Catch of wild adult eel	kg or tons											-	-	

【Notes】:

1. The catch data of Japanese eel are entered by glass eel, eel fry and wild adult eel, respectively.
2. Unit for catch of glass eel and eel fry should be weight in kilograms. Unit for adult eel should be weight in metric tons.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (catch of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

○Comments by Members:

Format 2: Data on Fishing effort on Japanese eel

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Fishing effort on glass eel	number of licenses (or fishermen, fishing vessels)											-		
Fishing effort on eel fry (kuroko)	number of licenses (or fishermen, fishing vessels)											-	-	
Fishing effort on wild adult eel	number of licenses (or fishermen, fishing vessels)											-	-	

【Notes】:

1. The data of fishing effort on Japanese eel are entered by glass eel, eel fry and adult eel, respectively.
2. Examples of unit for fishing effort may include the number of licenses, the number of fishermen or the number of fishing vessels. The unit can be chosen in accordance with each domestic legislations.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (fishing effort on glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

○Comments by Members:

Format 3: Input of eel seeds (glass eels and eel fry (kuroko)) into aquaculture ponds

Species	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
japonica	kg	8000.0	7000.0	45000.0	9300.0	8200.0	16500.0	3500.0	3000.0	36000.0	33000.0	18000.0	20000.0	9,000.0
domestic catch	kg				9300.0	8200.0	16500.0	3500.0	3000.0	36000.0	33000.0	18000.0	20000.0	9,000.0
imports	kg											-	-	-
Other eel species	kg	14500.0	20000.0	32000.0	35500.0	39500.0	36000.0	33000.0	33500.0	35000.0	29000.0	28,000.0	34000.0	30,000.0
bicolor	kg	5,500.0	7,000.0	13,500.0	3,500.0	8,000.0	3,000.0	0.0	0.0	0.0	0.0	0.0	3000.0	0.0
anguilla	kg	0.0	0.0	0.0	0.0	4,500.0	5,000.0	4,000.0	2,500.0	2,000.0	0.0	0.0	0.0	0.0
rostrata	kg	9,000.0	13,000.0	18,500.0	32,000.0	27,000.0	28,000.0	29,000.0	31,000.0	33,000.0	29,000.0	28,000.0	31000.0	30,000.0
marmorata	kg											-	-	-
mossambica	kg											-	-	-
Total	kg	22500.0	27000.0	77000.0	44800.0	47700.0	52500.0	36500.0	36500.0	71000.0	62000.0	46000.0	54000.0	39,000.0

【Notes】:

- Inputs of eel seeds (glass eels and eel fry) into aquaculture ponds are entered by japonica and other eel species, respectively
- The data of japonica are entered by domestical caught seeds and imported seeds, respectively
- However, eel seeds which transferred by other countries and regions are not included in the data of input of eel seeds.
- Unit for catch of glass eel and eel fry should be weight in kilograms.
- When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- The statistic period of the data related to eel seeds (input of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).

○Comments by Members:

Format 4: Aquaculture production

Species	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023-24
japonica	kg or tons	8,000.0	12,000.0	11,000.0	14,000.0	16,000.0	16,000.0	18,000.0	14,000.0	14,000.0	28,000.0	-	-	-
Other eel species	kg or tons	32000.0	30000.0	35000.0	42000.0	50000.0	52000.0	57000.0	65000.0	68000.0	64000.0	-	-	-
bicolor	kg or tons	1,000.0	2,000.0	2,000.0	3,000.0	1,000.0	1,000.0					-	-	-
anguilla	kg or tons	22,000.0	15,000.0	16,000.0	15,000.0	13,000.0	12,000.0	12,000.0	8,000.0	5,000.0	3,000.0	-	-	-
rostrata	kg or tons	9,000.0	13,000.0	17,000.0	24,000.0	36,000.0	39,000.0	45,000.0	57,000.0	63,000.0	61,000.0	-	-	-
marmorata	kg or tons											-	-	-
mossambica	kg or tons											-	-	-
Total	kg or tons	40000.0	42000.0	46000.0	56000.0	66000.0	68000.0	75000.0	79000.0	82000.0	92000.0	120000.0	145800.0	-

【Notes】:

1. The data of aquaculture production are entered by japonica and other eel species, respectively
2. Unit for aquaculture production should be weight (kilograms or metric tons) as far as possible.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Aquaculture production data should be the calendar year.

○Comments by Members:

Format 5: Other data on aquaculture

Item	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023-24
Scale of aquaculture industry	number of aquaculture operators	465	558	687	696	772	797	830	868	918	925	1004	1100	1280

【Notes】:

- ①Unit for scale of aquaculture industry may include the number of aquaculture operator or the dimensions of aquaculture ponds.
- ②When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.

○Comments by Members:

Format 6: Import of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
japonica	glass eel	kg											-	-	-
	eel fry (kuroko)	kg											-	-	-
Total		kg											-	-	-
Other eel species	glass eel	kg	14,500.0	20,000.0	32,000.0	35,500.0	39,500.0	36,000.0	33,000.0	33,500.0	35,000.0	29,000.0	28,000.0	34000	30,000.0
	eel fry (kuroko)	kg											-	-	-
Total		kg	14,500.0	20,000.0	32,000.0	35,500.0	39,500.0	36,000.0	33,000.0	33,500.0	35,000.0	29,000.0	28000.0	34,000.0	30,000.0

【Notes】:

1. The data of import of eel seeds (glass eels and eel fry) are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (import of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

○Comments by Members:

Format 7: Import of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023-24
japonica	live eel	kg or													
	broiled eel	kg or													
Other eel species		tons													
		kg or													
Total		kg or													
		tons													

【Notes】:

- ①The data of import of eel and eel products are entered by japonica and other eel species, respectively
- ②Examples of type/size of import of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
- ③When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- ④Unit for import of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members:

Format 8: Export of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
japonica	glass eel	kg	19000.0	14000.0	9500.0	10000.0	11200.0	12800.0	10000.0	11500.0	8000.0	5000.0	12000.0	13300	15,000.0
	eel fry (kuroko)	kg											-	-	-
Total		kg	19000.0	14000.0	9500.0	10000.0	11200.0	12800.0	10000.0	11500.0	8000.0	5000.0	12000.0	13,300.0	15,000.0
Other eel species	glass eel	kg													
	eel fry (kuroko)	kg													
Total		kg													

【Notes】:

1. The data of export of eel seeds are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (export of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members:

Format 9: Export of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023-24
japonica	live eel	kg or tons													
	broiled eel	kg or tons													
Other eel species		kg or tons													
		kg or tons													
Total		tons	36,398.0	33,917.0	35,001.0	40,295.0	41,426.0	42,357.0	/	46,732.0	52,432.0	69,917.0	64,200.0	66,660.0	-
japonica/Other eel species (Data on Japanese eel and other eels are	live eel	tons	3,846.0	5,295.0	5,818.0	5,562.0	6,219.0	6,781.0	/	7,508.0	9,630.0	10,107.0	14,100.0	17,159.0	-
	broiled eel	tons	32,552.0	28,622.0	29,183.0	34,733.0	35,207.0	35,576.0	/	39,224.0	42,802.0	59,810.0	50,100.0	49,501.0	-

【Notes】:

1. The data of export of adult eel and eel products are entered by japonica and other eel species, respectively
2. Examples of type/size of export of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for export of eel and eel products should be weight (kilograms or metric tons) as far as possible.

○Comments by Members:

Format 10. Mean value of wight and length of Japanese eel

	Unit	When catching	When inputing into aquaculture ponds	When importing	When exporting
glass eel	weight (g)				
	body length (cm)				
eel fry	weight (g)				
	body length (cm)				
adult eel	weight (g)				
	body length (cm)				

【Notes】:

1. The data of weight and length of Japanese eel into aquaculture ponds are entered by glass eel, eel fry and adult eel, respectively.
2. The data entered can be either mean value or figures in certain ranges (e.g., XX – YYg or cm). If mean value is available, it should be clearly mentioned in the comments by Members that the mean value of weight and length figures are based on biological or administrative standards or figures obtained from industry associations, etc.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. "Body length" is the length of a fish measured from the tip of the snout to the posterior end of the last vertebra.

○Comments by Members:

●Data Sources and/or Methods to collect or estimate the data

(* Please fill in data sources and/or methods to collect or estimate the data entried in from format 1 to format 14 respectively.)

1. Catch of glass eel	The data is estimated in every fishing period (from OctobeC152:S158r to May of next year) by adding the amount of export of glass eels to the amount of input of glass eels into aquaculture ponds by some local eel farming association.
2. Catch of eel fry (kuroko)	-
3. Catch of wild adult eel	There is no catch of adult eel in China.
4. Fishing effort on glass eel	
5. Fishing effort on eel fry (kuroko)	-

6. Fishing effort on wild adult eel	There is no catch of adult eel in China.
7. Input of eel seeds into aquaculture ponds	The data is based on the information from local eel farming association of the major eel production provinces.
8. Aquaculture production	The data is based on the information from local eel farming association of the major eel production provinces.
9. Scale of aquaculture industry	The data is based on the information from local eel farming association of the major eel production provinces.
10. Import of eel seeds	The data is based on the information from customs, fishery statistics and relevant industry associations.
11. Import of eel and eel products	The data is based on the information from customs, fishery statistics and relevant industry associations.
12. Export of eel seeds	The data is based on the information from customs, fishery statistics and relevant industry associations.
13. Export of eel and eel products	The data is based on the information from customs, fishery statistics and relevant industry associations.
14. Mean value of weight and length of Japanese eel	

【Revised Standard Working Formats for Eel Statistics (2025)】

Members: Japan

Format 1: Data on Catch of Japanese Eel (Data is limited to taken from the wild)

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Catch of glass eel	tons(~2014-15), kg(2015-16~)	9.0	5.2	17.4	15.3	13625.2	15442.4	8967.5	3670.1	17112.4	11333.9	10344.7	5660.2	7110.2	13400.7(*1)
Catch of eel fry (kuroko)(*2)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Catch of wild adult eel(*3)	tons	165	135	112	70	71	71	69	66	66	63	59	55	-	-

【Notes】:

1. The catch data of Japanese eel are entered by glass eel, eel fry and wild adult eel, respectively.
2. Unit for catch of glass eel and eel fry should be weight in kilograms. Unit for adult eel should be weight in metric tons.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (catch of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

○Comments by Members:

*1 The 2024-2025 season data of catch of glass eel is from 1st November to 31st March temporarily.

*2 There are no relevant data of "Catch of eel fry (kuroko)".

*3 The latest data available for "Catch of wild adult eel" is 2022-2023 season.

Format 2: Data on Fishing effort on Japanese eel

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Fishing effort on glass eel (*4)	number of licenses (or fishermen, fishing vessels)	6,669	6,781	6,617	4,698	4,398	4,790	5,874	5,898	5,762	5723	4467	4382	7321	-
Fishing effort on eel fry (kuroko)(*5)	number of licenses (or fishermen, fishing vessels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fishing effort on wild adult eel(*6)	number of licenses (or fishermen, fishing vessels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

【Notes】:

1. The data of fishing effort on Japanese eel are entered by glass eel, eel fry and adult eel, respectively.
2. Examples of unit for fishing effort may include the number of licenses, the number of fishermen or the number of fishing vessels. The unit can be chosen in accordance with each domestic legislations.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (fishing effort on glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

○Comments by Members:

*4 The latest data available for "Fishing effort on glass eel" is 2023-2024 season.

*5 There are no relevant data of "Fishing effort on eel fry (kuroko)".

*6 There are no relevant data of "Fishing effort on wild adult eel".

Format 3: Input of eel seeds (glass eels and eel fry (kuroko)) into aquaculture ponds

Species	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(*8)
japonica	kg	15.9	12.6	27.1	18.3	19716.2	19590.4	14178.5	15175.1	20131.4	18285.9	16187.7	16204.2	16172.2	16798.7
domestic catch	kg	9.0	5.2	17.4	15.3	13625.2	15442.4	8967.5	3670.1	17112.4	11333.9	10344.7	5660.2	7110.2	13400.7
imports	kg	6.9	7.4	9.7	3.0	6091	4148	5211	11505	3019	6952	5843	10544	9062	3398
Other eel species(*7)	kg	0.43	1.30	3.50	0.05	175.4	94.8	34.9	51.6	58.5	59.9	74.6	55.5	45.8	41.3
bicolor	kg												55.5	45.8	41.3
anguilla	kg												0.0	0.0	0.0
rostrata	kg												0.0	0.0	0.0
marmorata	kg												0.0	0.0	0.0
mossambica	kg												0.0	0.0	0.0
Total	kg	16.3	13.9	30.6	18.3	19891.6	19685.2	14213.4	15226.7	20189.9	18345.8	16262.3	16259.7	16218.0	16839.4

[Notes]:

- Inputs of eel seeds (glass eels and eel fry) into aquaculture ponds are entered by japonica and other eel species, respectively
- The data of japonica are entered by domestical caught seeds and imported seeds, respectively
- However, eel seeds which transferred by other countries and regions are not included in the data of input of eel seeds.
- Unit for catch of glass eel and eel fry should be weight in kilograms.
- When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- The statistic period of the data related to eel seeds (input of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).

Comments by Members:

*7 The species-specific data of "Other eel species" has been available since 2022-2023 season.

*8 The 2024-2025 season data of catch of glass eel is from 1st November to 31st March temporarily.

Format 4: Aquaculture production(*9,10)

Species	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
japonica	kg or tons	17,377	14,204	17,627	20,119	18,907	20,979	15,111	17,071	16,806	20,673	19,167	18,341	-	-
Other eel species	kg or tons														
bicolor	kg or tons														
anguilla	kg or tons														
rostrata	kg or tons														
marmorata	kg or tons														
mossambica	kg or tons														
Total	kg or tons	17,377	14,204	17,627	20,119	18,907	20,979	15,111	17,071	16,806	20,673	19,167	18,341	-	-

【Notes】:

1. The data of aquaculture production are entered by japonica and other eel species, respectively
2. Unit for aquaculture production should be weight (kilograms or metric tons) as far as possible.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Aquaculture production data should be the calendar year.

○Comments by Members:

*9 Total data of aquaculture production is entered, as it is not possible to provide species-specific data.

*10 The latest data available for "Aquaculture production" is 2023 temporarily.

Format 5: Other data on aquaculture

Item	Unit	2012(*11)	2013	2014(*11)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Scale of aquaculture industry	number of aquaculture operators	-	384	-	439	441	463	460	456	442	436	433	431	425	415

【Notes】:

- ① Unit for scale of aquaculture industry may include the number of aquaculture operator or the dimensions of aquaculture ponds.
- ② When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.

○Comments by Members:

*11 The data source for 2013 is "Census of Fisheries" published by the Ministry of Agriculture, Forestry and Fisheries every five years. The data from 2015 to 2025 are the total number of japonica-farming operators who are granted licenses issued by the Ministry of Agriculture, Forestry and Fisheries under the licensing system in accordance with the Inland Water Fishery Promotion Act, which entered into force in June 2015. There are no relevant data of 2012 and 2014.

Format 6: Import of eel seeds (glass eels and eel fry)(*12)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(*13)
japonica	glass eel	tons(~2014-15),	9.2	10.7	12.5	3.6	7,585	4,827	5,303	12,563	3,999	10,177	8,193	13,517	11,814	5,397
	eel fry (kuroko)	kg(2015-16~)														
Other eel species	glass eel	tons(~2014-15),	9.2	10.7	12.5	3.6	7,585	4,827	5,303	12,563	3,999	10,177	8,193	13,517	11,814	5,397
	eel fry (kuroko)	kg(2015-16~)														
Total		tons(~2014-15),	9.2	10.7	12.5	3.6	7,585	4,827	5,303	12,563	3,999	10,177	8,193	13,517	11,814	5,397
		kg(2015-16~)														

【Notes】:

1. The data of import of eel seeds (glass eels and eel fry) are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (import of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

○Comments by Members:

*12 It is not possible to provide type/size-specific and species-specific data. Therefore, a new row "Grand Total" was inserted for the total data of import of eel seeds (glass eels and eel fries) for all the species.

*13 The 2024-2025 season data of import of eel seeds (glass eels and eel fries) is from 1st November to 31st March temporarily.

Format 7: Import of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025(*15)
japonica	live eel	kg or tons														
	broiled eel	kg or tons														
Other eel species		kg or tons														
		kg or tons														
Total		kg or tons	19,660.9	18,257.7	20,213.7	31,156.1	31,469.3	32,293.5	33,236.3	31,409.8	34,342.8	42,366.8	38,580.7	33,930.7	44,730.2	9196.0
japonica/Other eel species (*14)	live eel	tons	4,677.6	4,789.2	4,781.1	7,066.7	7,276.1	6,815.7	8,812.7	6,733.2	5,441.1	7,034.5	8,267.4	7,402.8	8062.5	1519.1
	broiled eel	tons	14,983.3	13,468.5	15,432.7	24,089.4	24,193.2	25,477.8	24,423.6	24,676.6	28,901.7	35,332.3	30,313.2	26,527.8	36667.7	7676.9

【Notes】:

- ①The data of import of eel and eel products are entered by japonica and other eel species, respectively
- ②Examples of type/size of import of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
- ③When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- ④Unit for import of eel and eel products should be weight (kilograms or metric tons) as far as possible.

○Comments by Members:

*14 It is not possible to provide species-specific data. Therefore, a new row "japonica/Other eel species" was inserted for the data of import of all the species in live and broiled types separately.

*15 The 2025 data of import of eel and eel products is from 1st January to 31st March temporarily.

Format 8: Export of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
japonica	glass eel(*16)	tons(~2020-21), kg(2021-22)	-	-	-	-	-	-	-	-	-	0.1359	19.96	0	0	-
	eel fry (kuroko)(*17)	tons(~2020-21), kg(2021-22)	5.713	1.622	6.7	1.3	0.4	0.9	2.6	10.1	23.6	9.076	4818.78	5044.6	9900.8	-
Total		tons(~2020-21), kg(2021-22)	5.7	1.6	6.7	1.3	0.4	0.9	2.6	10.1	23.6	9.2	4,838.7	5,044.6	9900.8	-
Other eel species	glass eel	kg	-	-	-	-	-	-	-	-	-	0	0	0	0	-
	eel fry (kuroko)	kg	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	-
Total		kg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	-

[Notes]:

- The data of export of eel seeds are entered by japonica and other eel species, respectively
- The statistic period of the data related to eel seeds (export of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st December, 20XX to 31st November, 20XX+1.)
- When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- Unit for catch of glass eel and eel fry should be weight in kilograms.

○Comments by Members:

*16 The "glass eel" is the eels in 13g or less that have never been farmed in domestic aquaculture ponds. It is not possible to provide the data up to 2019-20, as the export of such "glass eel" was prohibited. The latest data available for glass eel is 2023-2024 season.

*17 The "eel fry (kuroko)" is the eels in 13g or less that have been farmed in domestic aquaculture ponds. The latest data available for eel fry (kuroko) is 2023-2024 season.

Format 9: Export of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023-24	2024-25(*19)
japonica	live eel	kg or tons														
	broiled eel	kg or tons														
Other eel species		kg or tons														
		kg or tons														
Total		kg or tons	31.6	32.1	69.6	59.6	71.0	112.2	66.5	80.4	135.2	85.9	81.2	41.0	69.5	21.2
japonica/Other eel species (*18)	live eel	tons	10.4	2.2	38.8	20.7	25.8	45.6	7.4	17.8	44.8	17.0	9.3	8.5	18.2	11.4
	broiled eel	tons	21.2	30.0	30.9	38.9	45.2	66.6	59.1	62.6	90.4	68.9	71.9	32.5	51.3	9.8

[Notes]:

- The data of export of adult eel and eel products are entered by japonica and other eel species, respectively
- Examples of type/size of export of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
- When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- Unit for export of eel and eel products should be weight (kilograms or metric tons) as far as possible.

○Comments by Members:

*18 It is not possible to provide species-specific data. Therefore, a new row "japonica/Other eel species" was inserted for the data of export of all the species in live and boiled types separately.

*19 The 2025 data of export of eel and eel products is from 1st January to 31st March temporarily.

Format 10. Mean value of weight and length of Japanese eel

	Unit	When catching(*20)	When inputting into aquaculture ponds(*21)	When importing(*22)	When exporting(*23)
glass eel	weight (g)	0.2g	-	-	~ 13g
	body length (cm)	6cm	-	-	-
eel fry	weight (g)	0.2g ~ 13g	-	-	~ 13g
	body length (cm)	6cm ~ 20cm	-	-	-
adult eel	weight (g)	300g ~	-	-	-
	body length (cm)	50cm ~	-	-	-

【Notes】:

1. The data of weight and length of Japanese eel into aquaculture ponds are entered by glass eel, eel fry and adult eel, respectively.

2. The data entered can be either mean value or figures in certain ranges (e.g., XX ~ YY g or cm). If mean value is available, it should be clearly mentioned in the comments by Members that the mean value of weight and length figures are based on biological or administrative standards or figures obtained from industry associations.

3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.

4. "Body length" is the length of a fish measured from the tip of the snout to the posterior end of the last vertebra.

○Comments by Members:

*20 The data of each "when catching" is estimated based on actual measurement values of weight and total length at each life stage of Japanese eel.

*21 There are no relevant data of "When inputting into aquaculture ponds".

*22 There are no relevant data of "When importing".

*23 There are no relevant data of total length because the glass eel and eel fry(kuroko) are administrated with "weight" in accordance with Export Trade Control Order when

●Data Sources and/or Methods to collect or estimate the data

(* Please fill in data sources and/or methods to collect or estimate the data entered in from format 1 to format 14 respectively.)

1. Catch of glass eel	The data is estimated in every fishing period (from November of previous year to May) by deducting the amount of import of glasseels (calculated from the Trade Statistics every fishing period) from the amount of input of glass eels into aquaculture ponds which reported by eel-farming operators.
2. Catch of eel fry (kuroko)	-
3. Catch of wild adult eel	The data is from "Annual Statistics on Fisheries and Aquaculture Production" compiled and published by the Ministry of Agriculture, Forestry and Fisheries. The data contained in this statistics are derived from questionnaires on catch and aquaculture production sent to fisheries cooperatives covering main rivers and lakes as well as aquaculture operators all around the country.
4. Fishing effort on glass eel	The index of fishing effort on glass eels is the total number of licenses submitted by each prefecture which has the mandate to issue licenses.

5. Fishing effort on eel fry (kuroko)	-
6. Fishing effort on wild adult eel	-
7. Input of eel seeds into aquaculture ponds	The data is from the amount of input of glass eels into aquaculture ponds which reported by eel-farming operators. The data of eel seeds domestically captured is estimated by deducting the amount of input of glass eels into aquaculture ponds which reported by eel-farming operators from the amount of import of glass eels (calculated from the Trade Statistics). The data of imported eel seeds is calculated from the Trade Statistics every fishing period.
8. Aquaculture production	The data is from "Annual Statistics on Fisheries and Aquaculture Production" compiled and published by the Ministry of Agriculture, Forestry and Fisheries.
9. Scale of aquaculture industry	The index of scale of aquaculture industry is the number of aquaculture operators. The data for 2013 is from "Census of Fisheries" published by the Ministry of Agriculture, Forestry and Fisheries every five years. The data from 2015 is the total number of eel-farming operators who are granted licenses issued by the Ministry of Agriculture, Forestry and Fisheries under the licensing system in accordance with the Inland Water Fishery Promotion Act, which entered into force in June 2015.
10. Import of eel seeds	The data is from "Trade Statistics" compiled and published by the Ministry of Finance. The statistic code is 03.01.92.100 (live fish - eels (Anguilla spp.) - fry for fish culture).
11. Import of eel and eel products	The data is from "Trade Statistics" compiled and published by the Ministry of Finance. The statistic codes are 03.01.92.000 (live fish- eels (Anguilla spp.)) and 1604.17.000 (prepared or preserved fish, caviar and caviar substitutes prepared from fish eggs - eels). The amount of broiled eel is calculated as body of fish, dividing the amount of products by 0.6.
12. Export of eel seeds	The data is from the custom records and the reports submitted by exporters on eel seeds actually exported.
13. Export of eel and eel products	The data is from "Trade Statistics" compiled and published by the Ministry of Finance. The statistic codes are 03.01.92.000 (live fish- eels (Anguilla spp.)) and 1604.17.000 (prepared or preserved fish, caviar and caviar substitutes prepared from fish eggs - eels). The amount of broiled eel is calculated as body of fish, dividing the amount of products by 0.6.
14. Mean value of weight and length of Japanese eel	The value of weight of glass eel and eel fry (kuroko) when exporting are from Export Trade Control Order. The data of weight and total length of glass eel, eel fry (kuroko) and adult eel are estimated based on actual measurement values of weight and total length.

【Revised Standard Working Formats for Eel Statistics (2025)】

Members: Korea

Format 1: Data on Catch of Japanese Eel (Data is limited to taken from the wild)

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2024-25
Catch of glass eel	kg	1,530	1,002	5,489	4,725	1,830	2,717	973	649	4,500	3,228	2,512	2,165	7,050
Catch of eel fry (kuroko)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-
Catch of wild adult eel	tons	102	73	80	85	70	48	56	60	59	84	9	55	-

【Notes】:

1. The catch data of Japanese eel are entered by glass eel, eel fry and wild adult eel, respectively.
2. Unit for catch of glass eel and eel fry should be weight in kilograms. Unit for adult eel should be weight in metric tons.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (catch of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

Comments by Members:

Format 2: Data on Fishing effort on Japanese eel

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Fishing effort on glass eel	number of licences (or fishermen, fishing vessels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fishing effort on eel fry (kuroko)	number of licences (or fishermen, fishing vessels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fishing effort on wild adult eel	number of licences (or fishermen, fishing vessels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

【Notes】:

1. The data of fishing effort on Japanese eel are entered by glass eel, eel fry and adult eel, respectively.
2. Examples of unit for fishing effort may include the number of licenses, the number of fishermen or the number of fishing vessels. The unit can be chosen in accordance with each domestic legislations.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (fishing effort on glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

Comments by Members: As number of licences is not managed by species in Korea, relevant data is not available.

Format 3: Input of eel seeds (glass eels and eel fry (kuroko)) into aquaculture ponds

Species	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
japonica	kg	3,595	2,992	13,927	6,707	9,380	10,596	5,234	2,524	9,502	8,149	8,185	10,214	7,806	19,195
domestic catch	kg	1,530	1,002	5,489	4,725	1,830	2,717	973	649	4,500	3,228	2,512	2,165	1,330	7,050
imports	kg	2,065	1,990	8,438	1,982	7,550	7,879	4,261	1,875	5,002	4,921	5,673	8,049	6,476	12,145
Other eel species	kg	5,628	13,987	3,166	5,145	3,004	657	3,690	2,959	692	1,297	1,914	1,987	193	120
bicolor	kg	3,508	5,908	2,668	4,986	2,937	590	3,405	393	542	714	880	588	153	30
anguilla	kg	75	0	0	0	0	0	0	0	0	0	0	0	0	0
rostrata	kg	1,726	5,520	498	159	35	35	168	0	5	8	28	0	0	0
marmorata	kg	294	439	0	0	32	32	117	2,566	145	575	1,006	1,399	40	90
mossambica	kg	25	2,120	0	0	0	0	0	0	0	0	0	0	0	0
Total	kg	9,223	16,979	17,093	11,852	12,384	11,253	8,924	5,483	10,194	9,446	10,099	12,201	7,999	19,315

[Notes]:

- Inputs of eel seeds (glass eels and eel fry) into aquaculture ponds are entered by japonica and other eel species, respectively
- The data of japonica are entered by domestical caught seeds and imported seeds, respectively
- However, eel seeds which transferred by other countries and regions are not included in the data of input of eel seeds.
- Unit for catch of glass eel and eel fry should be weight in kilograms.
- When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- The statistic period of the data related to eel seeds (input of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).

Comments by Members:

Format 4: Aquaculture production

Species	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
japonica	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other eel species	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bicolor	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
anguilla	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
rostrata	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
marmorata	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mossambica	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	tons	4,259	5,149	5,631	9,009	9,836	11,095	10,530	10,885	9,724	15,678	18,131	16,045	15,978	3,277

【Notes】:

1. The data of aquaculture production are entered by japonica and other eel species, respectively
2. Unit for aquaculture production should be weight (kilograms or metric tons) as far as possible.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Aquaculture production data should be the calendar year.

Comments by Members:

Format 5: Other data on aquaculture

Item	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024-2025
Scale of aquaculture industry	number of aquaculture operators	524	532	536	564	542	555	558	572	592	616	589	646	614

【Notes】:

- ①Unit for scale of aquaculture industry may include the number of aquaculture operator or the dimensions of aquaculture ponds.
- ②When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.

Comments by Members:

Format 6: Import of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
japonica	glass eel	kg	2,065	1,990	8,438	1,982	7,550	7,879	4,261	1,875	5,002	4,921	5,673	8,049	6,827	12,186
	eel fry (kuroko)	kg	0	225	5,605	4,499	2,523	2,309	9,062	8,361	2,077	23,120	8,136	4,406	10,013	4,714
Total		kg	2,065	2,215	14,043	6,481	10,073	10,188	13,323	10,236	7,079	28,041	13,809	12,455	16,840	16,900
Other eel species	glass eel	kg	5,628	13,987	3,166	5,145	3,004	657	3,690	2,959	692	1,297	1,914	1,987	1,270	477
	eel fry (kuroko)	kg	1,208	37,717	1,842	10,223	19,078	4,751	14,631	12,727	3,601	4,267	981	1,325	2,353	255
Total		kg	6,836	51,704	5,008	15,368	22,082	5,408	18,321	15,686	4,293	5,564	2,895	3,312	3,623	732

[Notes]:

1. The data of import of eel seeds (glass eels and eel fry) are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (import of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.)
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members:

Format 7: Import of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2024	2025.5
Anguilla sp.	live eel	tons	137.7	837.0	1,358.8	799.2	615.9	740.6	1,011.9	574.7	2,539.2	1,337.4	2,891	4,489.0	3,601	333.7
	freeze	tons	26.9	43.2	38.3	26.1	63.7	42.1	71.8	55.5	25.3	25.3	125.6	23.6	5	0.1
	cold storage	tons	0.1	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0	0.0
	broiled eel	tons	69.2	66.7	69.6	183.9	308.8	583.9	757.8	784.6	906.9	1,257.3	1,441.3	1,530.9	1,704.9	461.4
	Total	tons	233.9	946.9	1,466.8	1,009.2	988.4	1,366.6	1,841.8	1,414.8	3,471.4	2,620.0	4,457.9	6,043.5	5,211	795.2

[Notes]:

- ① The data of import of eel and eel products are entered by japonica and other eel species, respectively
- ② Examples of type/size of import of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
- ③ When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- ④ Unit for import of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members: Relevant data is not available by species.

Format 8: Export of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2025.5
<i>Anguilla</i> sp.	glass eel	kg	0	0	50	0	0	0	0	0	4,560	3,072	0	1,260	0	160
	eel fry (kuroko)	kg	0	0	3,262	0	138	0	0	0	0	0	0	0	0	0
	Total	kg	0	0	3,312	0	138	0	0	0	4,560	3,072	0	1,260	0	160

[Notes]:

1. The data of export of eel seeds are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (export of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members: Relevant data is not available by species. Glass eel: below 0.3g & for aquaculture. Eel fry: between 0.3g to 50g & for aquaculture

Format 9: Export of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<i>Anguilla</i> sp.	live eel	tons	79.9	2.3	0.1	0.4	0.0	19.4	0.2	0.0	5.2	3.1	0.0	0.0	0.0	0.0
	freeze	tons	11.1	1.1	0.0	0.1	2.1	23.8	25.2	0.3	1.0	1.0	0.3	1.4	3.8	0.8
	cold storage	tons	0.1	0.0	0.0	0.1	0.0	0.0	0.6	0.0	0.2	1.0	0.1	0.3	0.3	0.0
	broiled eel	tons	0.1	7.3	0.3	1.4	3.3	1.1	4.2	5.9	4.7	42.3	89.2	43.2	3.3	1.5
	Total	tons	91.2	10.7	0.4	2.0	5.4	44.3	30.2	6.2	11.1	47.4	89.6	44.9	7.4	2.3

[Notes]:

1. The data of export of adult eel and eel products are entered by japonica and other eel species, respectively
2. Examples of type/size of export of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for export of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members: Relevant data is not available by species.

Format 10. Mean value of wight and length of Japanese eel

	Unit	When catching	When inputing into aquaculture	When importing	When exporting
glass eel	weight (g)	0.2g	0.2g	below 0.3g	below 0.3g
	body length (cm)	5~7cm	5~7cm	-	-
eel fry	weight (g)	0.3g~199g	-	between 0.3g to 50g	between 0.3g to 50g
	body length (cm)	8~59cm	-	-	-
adult eel	weight (g)	above 200g	-	-	-
	body length (cm)	above 60cm	-	-	-

【Notes】:

1. The data of weight and length of Japanese eel into aquaculture ponds are entered by glass eel, eel fry and adult eel, respectively.
2. The data entered can be either mean value or figures in certain ranges (e.g., XX~YYg or cm). If mean value is available, it should be clearly mentioned in the comments by Members that the mean value of weight and length figures are based on biological or administrative standards or figures obtained from industry associations, etc.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. "Body length" is the length of a fish measured from the tip of the snout to the posterior end of the last vertebra.

Comments by Members: The data is calculated based on materials submitted by Fresh Water Eel Culture Fisheries Cooperative, not stipulated in national laws.

●Data Sources and/or Methods to collect or estimate the data

(* Please fill in data sources and/or methods to collect or estimate the data entried in from format 1 to format 14 respectively.)

1. Catch of glass eel	Fresh Water Eel Culture Fisheries Cooperative and Fisheries Monotoring Center of Korea Maritime Institute
2. Catch of eel fry (kuroko)	Not Applicable
3. Catch of wild adult eel	Survey of recent trends in fishery production' by Statistics Korea
4. Fishing effort on glass eel	Not Applicable
5. Fishing effort on eel fry (kuroko)	Not Applicable
6. Fishing effort on wild adult eel	Not Applicable
7. Input of eel seeds into aquaculture ponds	Fresh Water Eel Culture Fisheries Cooperative and Fisheries Monotoring Center of Korea Maritime Institute
8. Aquaculture production	Survey of recent trends in fishery production' by Statistics Korea (not managed by species)
9. Scale of aquaculture industry	Local government
10. Import of eel seeds	National Fishery Products Quality Management Service (NFQS)
11. Import of eel and eel products	수산물정보포털시스템(www.fips.go.kr)
12. Export of eel seeds	수산물정보포털시스템(www.fips.go.kr)

13. Export of eel and eel products	수산물정보포털시스템(www.fips.go.kr)
14. Mean value of wight and length of Japanese eel	Fresh Water Eel Culture Fisheries Cooperative and Fisheries Monotoring Center of Korea Maritime Institute

【Revised Standard Working Formats for Eel Statistics (2025)】

Members: Chinese Taipei

Format 1: Data on Catch of Japanese Eel (Data is limited to taken from the wild)

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(*1)
Catch of glass eel	kg	1,912	960	8,250	1,100	3,060	4,500	1,100	2,751	5,244	6,005	1,607	1,850	1,295	6,230
Catch of eel fry (kuroko)(*2)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Catch of wild adult eel (*2)	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-

【Notes】:

1. The catch data of Japanese eel are entered by glass eel, eel fry and wild adult eel, respectively.
2. Unit for catch of glass eel and eel fry should be weight in kilograms. Unit for adult eel should be weight in metric tons.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (catch of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

Comments by Members :

*1 The catch of glass eel 2024-2025 season is preliminary data.

*2 There are no available statistics for eel fry and wild adult eel fishing fisheries in Chinese Taipei.

Format 2: Data on Fishing effort on Japanese eel

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Fishing effort on glass eel	number of licences (or fishermen, fishing vessel)	-	213	232	250	245	251	272	311	363	374	364	322	301	305
Fishing effort on eel fry (kuroko)(*3)	number of licences (or fishermen, fishing vessel)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fishing effort on wild adult eel(*3)	number of licences (or fishermen, fishing vessel)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

【Notes】:

1. The data of fishing effort on Japanese eel are entered by glass eel, eel fry and adult eel, respectively.
2. Examples of unit for fishing effort may include the number of licenses, the number of fishermen or the number of fishing vessels. The unit can be chosen in accordance with each domestic legislations.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (fishing effort on glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

Comments by Members :

*3 There are no available statistics for eel fry and wild adult eel fishing fisheries in Chinese Taipei.

Format 3: Input of eel seeds (glass eels and eel fry (kuroko)) into aquaculture ponds(*4)

Species	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(*5)
japonica	kg	2,210	1,510	12,500	2,800	3,600	7,300	1,030	834	8,144	4,558	887	776	657	3135
domestic catch	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
imports	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other eel species	kg	5,500	10,000	1,450	200	80	100	50	141	124	114	70	52	20	20
bicolor	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
anguilla	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
rostrata	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
marmorata	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mossambica	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	kg	7,710	11,510	13,950	3,000	3,680	7,400	1,080	975	8,267	4,672	957	828	677	3,155

[Notes]:

1. Inputs of eel seeds (glass eels and eel fry) into aquaculture ponds are entered by japonica and other eel species, respectively
2. The data of japonica are entered by domestical caught seeds and imported seeds, respectively
3. However, eel seeds which transferred by other countries and regions are not included in the data of input of eel seeds.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.
5. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
6. The statistic period of the data related to eel seeds (input of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).

Comments by Members:

*4 Because the eel culture industry in Chinese Taipei has some characteristics, such as several breeding stages and longer seed stocking time, the data would be expressed in total statistics.

*5 The input of glass eel into aquaculture ponds 2024-2025 season is preliminary data from 1st November to 30th April.

Format 4: Aquaculture production(*6)

Species	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024(*7)	2025
japonica	tons	2,244	1,500	1,675	5,187	4,658	3,665	4,204	3,521	1,693	5,044	3,471	2,667	1,273	-
Other eel species	tons	-	404	228	394	154	81	106	142	155	219	152	60	125	-
bicolor	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
anguilla	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
rostrata	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
marmorata	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mossambica	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	tons	2,244	1,904	1,903	5,581	4,812	3,746	4,310	3,663	1,848	5,263	3,623	2,727	1,398	-

【Notes】:

1. The data of aquaculture production are entered by japonica and other eel species, respectively
2. Unit for aquaculture production should be weight (kilograms or metric tons) as far as possible.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Aquaculture production data should be the calendar year.

Comments by Members:

*6 The eel aquaculture production statistics in Chinese Taipei, which are divided into two categories 'Japanese eel' and 'other eel species', are reported by local governments. Thus, the data would be expressed in total statistics.

*7 The aquaculture production in 2024 is preliminary data.

Format 5: Other data on aquaculture

Item	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024(*8)	2025
Scale of aquaculture industry	number of aquaculture operators	449	305	456	391	392	409	341	241	317	391	330	287	188	-

【Notes】:

- ①Unit for scale of aquaculture industry may include the number of aquaculture operator or the dimensions of aquaculture ponds.
- ②When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.

Comments by Members:

*8 The hectares of aquaculture area in 2024 is preliminary data.

Format 6: Import of eel seeds (glass eels and eel fry)(*9)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(*10)
japonica	glass eel	kg	1,319	664	2,044	631	352	688	2,270	127	2,232	518	433	423	329	1,811
	eel fry (kuroko)	kg	508	708	4,286	60	764	1,950	91	55	7,853	1,273	563	536	73	2,790
Total		kg	1,827	1,372	6,330	691	1,116	2,638	2,361	182	10,085	1,791	996	959	402	4,601
Other eel species(*11)	glass eel	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	eel fry (kuroko)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[Notes]:

1. The data of import of eel seeds (glass eels and eel fry) are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (import of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members:

*9 The CCC(Import and Export Commodity Classification of Chinese Taipei) codes are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220305[Young eel (11-500 pcs per Kg)].

*10 The data of import of eel seeds 2024-25 is from 1st January to 31st Mar.

*11 According to the statistic of Customs Administration, Ministry of Finance and the CCC(Import and Export Commodity Classification of Chinese Taipei) codes, there are no available statistics for other eel species.

Format 7: Import of eel and eel products(*12)

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025(*13)
japonica	live eel	tons	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	broiled eel	tons	0.0	0.0	0.0	0.0	0.1	6.5	0.0	0.0	188.6	37.7	1.0	0.4	0.0	1.8
Other eel species(*14)		tons	10.7	7.7	28.3	4.1	0.6	3.3	2.2	4.2	0.0	0.0	0.0	0.0	0.0	0.0
		tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		tons	11.0	7.7	28.3	4.1	0.9	14.1	2.2	4.2	314.3	62.9	1.7	0.8	0	3

[Notes]:

- ①The data of import of eel and eel products are entered by japonica and other eel species, respectively
- ②Examples of type/size of import of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
- ③When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- ④Unit for import of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members:

*12 Since 2016 Taiwan has adopted the general trade system, which includes bonded warehouses, logistics centers, and free trade zones in the commodity trade statistics.

*13 The data of import of eel and eel products 2025 is from 1st January to 31st March.

*14 According to the statistic of Customs Administration, Ministry of Finance and the CCC(Import and Export Commodity Classification of Chinese Taipei) codes, there are no available statistics for broiled eel of other eel species.

Format 8: Export of eel seeds (glass eels and eel fry)(*15)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(*16)
japonica	glass eel	kg	869	93	150	0	0	0	260	0	0	228	168	0	535	0
	eel fry (kuroko)	kg	399	21	10	0	101	0	2,886	68	1,062	5,390	974	991	116	0
Total		kg	1,268	114	160	0	101	0	3,146	68	1,062	5,618	1,142	991	651	0
Other eel species(*17)	glass eel	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	eel fry (kuroko)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-

【Notes】:

1. The data of export of eel seeds are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (export of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members:

*15 The CCC(Import and Export Commodity Classification of Chinese Taipei) codes are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220305[Young eel (11-500 pcs per Kg)].

*16 The data of Export of eel seeds 2024-25 is from 1st January to 31st Mar.

*17 According to the statistic of Customs Administration, Ministry of Finance and the CCC(Import and Export Commodity Classification of Chinese Taipei) codes, there are no available statistics for other eel species.

Format 9: Export of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025(*18)
japonica	live eel	tons	1,362.7	866.8	891.6	2,845.1	2,544.4	2,030.4	2,396.4	1,862.3	1,009.1	1,417.3	1,654.1	954.5	475.3	49.7
	broiled eel	tons	370.4	176.0	153.4	561.7	230.2	135.3	162.8	94.4	56.7	238.9	131.3	107.2	40.0	6.3
Other eel species	live eel	tons	95.0	18.6	19.8	13.6	0.0	18.1	48.0	12.9	0.0	0.0	0.0	0.0	0.0	0.0
	broiled eel (*19)	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		tons	1,828.1	1,061.4	1,064.8	3,420.4	2,774.6	2,183.8	2,607.2	1,969.7	1,065.9	1,656.2	1,785.3	1,061.7	515.3	56.0

【Notes】:

1. The data of export of adult eel and eel products are entered by japonica and other eel species, respectively
2. Examples of type/size of export of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for export of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members:

*18 The data of Export of eel and eel products 2025 is from 1st January to 31st March.

*19 According to the statistic of Customs Administration, Ministry of Finance and the CCC(Import and Export Commodity Classification of Chinese Taipei) codes, there are no available statistics for broiled eel of other eel species.

Format 10. Mean value of weight and length of Japanese eel(*19,20)

	Unit	When catching	When inputting into aquaculture	When importing	When exporting
glass eel	weight (g)				
	body length (cm)				
eel fry	weight (g)				
	body length (cm)				
adult eel	weight (g)				
	body length (cm)				

【Notes】:

1. The data of weight and length of Japanese eel into aquaculture ponds are entered by glass eel, eel fry and adult eel, respectively.
2. The data entered can be either mean value or figures in certain ranges (e.g., XX – YY g or cm). If mean value is available, it should be clearly mentioned in the comments by Members that the mean value of weight and length figures are based on biological or administrative standards or figures obtained from industry associations, etc.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. "Body length" is the length of a fish measured from the tip of the snout to the posterior end of the last vertebra.

Comments by Members:

*19 Because the eel culture industry in Chinese Taipei has some characteristics, such as several breeding stages and longer seeds stocking time, there are no available statistics for mean value of weight and length of Japanese eel.

*20 According to the statistic of Customs Administration, Ministry of Finance, the CCC(Import and Export Commodity Classification of Chinese Taipei) codes are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220305[Young eel (11-500 pcs per Kg)].

●Data Sources and/or Methods to collect or estimate the data

(* Please fill in data sources and/or methods to collect or estimate the data entered in from format 1 to format 14 respectively.)

1. Catch of glass eel	The data of catch of glass eel originates from the Taiwan Fisheries Statistical Yearbook. The local governments collect the data through regional fisherman's associations and report to Fisheries Agency seasonally. If there is any unreasonable point found, Fisheries Agency will request the local governments recheck and reconfirm. Besides, Japanese eel is the majority of species (<i>Anguilla</i> spp) but it may possibly cover a little of other eel species. The original unit for catch of glass eel is PCs and it has been converted to weight by the rate of 5,000 PCs/ Kg. Besides, the fishing periods year has been adopted from 2011.Hence, it might be difficult to retrace the original condition, so only reasonable data are provided. The data of 2013 is estimated number, which could be adjusted after confirmed.
2. Catch of eel fry (kuroko)	There are no available statistics for eel fry fishing fisheries in Chinese Taipei.
3. Catch of wild adult eel	There are no available statistics for wild adult eel fishing fisheries in Chinese Taipei.
4. Fishing effort on glass eel	The number of fishing vessel, which is authorized to catch glass eel.

5. Fishing effort on eel fry (kuroko)	There are no available statistics for eel fry fishing fisheries in Chinese Taipei.
6. Fishing effort on wild adult eel	There are no available statistics for wild adult eel fishing fisheries in Chinese Taipei.
7. Input of eel seeds into aquaculture pond	The data of Japanese eel and other eel are compiled by Taiwan eel farming industry development foundation based on the reports from its member on input.
8. Aquaculture production	The eel aquaculture production statistics in Chinese Taipei, which are divided into two categories 'Japanese eel' and 'other eel species', are reported by local governments. Thus, the data would be expressed in total statistics.
9. Scale of aquaculture industry	The scale of aquaculture is measured by aquaculture area (hectare). The data of aquaculture area originate from the Taiwan Fisheries Statistical Yearbook. The local governments collect the data through the oral questionnaire surveyed by the offices of village, town, or district, and report to Fisheries Agency seasonally. If there is any unreasonable point found, Fisheries Agency will request the local governments recheck and reconfirm. The data of 2013 is estimated number, which could be adjusted after confirmed.
10. Import of eel seeds	The data of importation is derived from the statistic of Customs Administration, Ministry of Finance. The CCC(Import and Export Commodity Classification of Chinese Taipei) code are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220305[Young eel (11-500 pcs per Kg)].
11. Import of eel and eel products	The data of exportation is derived from the statistic of Customs Administration, Ministry of Finance. The CCC(Import and Export Commodity Classification of Chinese Taipei) code are 03019210101(Live Japanese eel), 16041700125(Roasted eel), 16041700116(Prepared eel), 03019210904(<i>Anguilla</i> spp.), 03019210307(<i>Anguilla australis</i>) and 03019210209(<i>Anguilla marmorata</i>). Besides, since 2013, the CCC code of Prepared eel has been changed as 16041700116 and Roasted eel as 16041700125.
12. Export of eel seeds	The data of exportation is derived from the statistic of Customs Administration, Ministry of Finance. The CCC(Import and Export Commodity Classification of Chinese Taipei) code are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220305[Young eel (11-500 pcs per Kg)].
13. Export of eel and eel products	The data of exportation is derived from the statistic of Customs Administration, Ministry of Finance. The CCC(Import and Export Commodity Classification of Chinese Taipei) code are 03019210101(Live Japanese eel), 16041700125(Roasted eel), 16041700116(Prepared eel), 03019210904(<i>Anguilla</i> spp.), 03019210307(<i>Anguilla australis</i>) and 03019210209(<i>Anguilla marmorata</i>). Besides, since 2013, the CCC code of Prepared eel has been changed as 16041700116 and Roasted eel as 16041700125.
14. Mean value of wight and length of Japanese eel	The data of exportation is derived from the statistic of Customs Administration, Ministry of Finance. The CCC(Import and Export Commodity Classification of Chinese Taipei) codes are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220305[Young eel (11-500 pcs per Kg)].

附件 28 秘書處更新中國大陸數據

【Revised Standard Working Formats for Eel Statistics (2025)】

Members: China

IC18 Doc.13 rev1

Format 1: Data on Catch of Japanese Eel (Data is limited to taken from the wild)

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023	2024	2024-2025
Catch of glass eel	kg	28000.0	19500.0	55000.0	20500.0	21000.0	26500.0	16000.0	14500.0	50000.0	38000.0	29500.0	40450.0	13,095.0	15,458.0	-
Catch of eel fry (kuroko)	kg															
Catch of wild adult eel	kg or tons															

【Notes】:

1. The catch data of Japanese eel are entered by glass eel, eel fry and wild adult eel, respectively.
2. Unit for catch of glass eel and eel fry should be weight in kilograms. Unit for adult eel should be weight in metric tons.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (catch of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

○Comments by Members:

*According to China Fishery Statistical Yearbook, catch data is only available up to 2023, totaling 13,095 kg. China currently has no statistical data for this year's catch.

Format 2: Data on Fishing effort on Japanese eel

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Fishing effort on glass eel	number of licenses (or fishermen, fishing vessels)											-		
Fishing effort on eel fry (kuroko)	number of licenses (or fishermen, fishing vessels)											-	-	
Fishing effort on wild adult eel	number of licenses (or fishermen, fishing vessels)											-	-	

【Notes】:

1. The data of fishing effort on Japanese eel are entered by glass eel, eel fry and adult eel, respectively.
2. Examples of unit for fishing effort may include the number of licenses, the number of fishermen or the number of fishing vessels. The unit can be chosen in accordance with each domestic legislations.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (fishing effort on glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

○Comments by Members:

Format 3: Input of eel seeds (glass eels and eel fry (kuroko)) into aquaculture ponds

Species	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
japonica	kg	8000.0	7000.0	45000.0	9300.0	8200.0	16500.0	3500.0	3000.0	36000.0	33000.0	18000.0	20000.0	9,000.0	-
domestic catch	kg				9300.0	8200.0	16500.0	3500.0	3000.0	36000.0	33000.0	18000.0	20000.0	9,000.0	
imports	kg											-	-	-	
Other eel species	kg	14500.0	20000.0	32000.0	35500.0	39500.0	36000.0	33000.0	33500.0	35000.0	29000.0	28,000.0	34000.0	30,000.0	-
bicolor	kg	5,500.0	7,000.0	13,500.0	3,500.0	8,000.0	3,000.0	0.0	0.0	0.0	0.0	0.0	3000.0	0.0	0.0
anguilla	kg	0.0	0.0	0.0	0.0	4,500.0	5,000.0	4,000.0	2,500.0	2,000.0	0.0	0.0	0.0	0.0	0.0
rostrata	kg	9,000.0	13,000.0	18,500.0	32,000.0	27,000.0	28,000.0	29,000.0	31,000.0	33,000.0	29,000.0	28,000.0	31000.0	30,000.0	-
marmorata	kg											-	-	-	-
mossambica	kg											-	-	-	-
Total	kg	22500.0	27000.0	77000.0	44800.0	47700.0	52500.0	36500.0	36500.0	71000.0	62000.0	46000.0	54000.0	39,000.0	-

[Notes]:

- Inputs of eel seeds (glass eels and eel fry) into aquaculture ponds are entered by japonica and other eel species, respectively
- The data of japonica are entered by domestical caught seeds and imported seeds, respectively
- However, eel seeds which transferred by other countries and regions are not included in the data of input of eel seeds.
- Unit for catch of glass eel and eel fry should be weight in kilograms.
- When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- The statistic period of the data related to eel seeds (input of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st Novemver, 20XX to 31st October, 20XX+1.).

Comments by Members:

* About Japanese eel: China has not yet obtained data on the input of eel seeds for 2024-2025 season.

* About other eel species: China has not yet obtained data on the input of American eel seeds (*Anguilla rostrata*) for the current season (2024-2025).

Format 4: Aquaculture production

Species	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023	2024
japonica	kg or tons	8,000.0	12,000.0	11,000.0	14,000.0	16,000.0	16,000.0	18,000.0	14,000.0	14,000.0	28,000.0	-	-	-	-
Other eel species	kg or tons	32000.0	30000.0	35000.0	42000.0	50000.0	52000.0	57000.0	65000.0	68000.0	64000.0	-	-	-	-
bicolor	kg or tons	1,000.0	2,000.0	2,000.0	3,000.0	1,000.0	1,000.0	-	-	-	-	-	-	-	-
anguilla	kg or tons	22,000.0	15,000.0	16,000.0	15,000.0	13,000.0	12,000.0	12,000.0	8,000.0	5,000.0	3,000.0	-	-	-	-
rostrata	kg or tons	9,000.0	13,000.0	17,000.0	24,000.0	36,000.0	39,000.0	45,000.0	57,000.0	63,000.0	61,000.0	-	-	-	-
marmorata	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mossambica	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	kg or tons	40000.0	42000.0	48000.0	56000.0	66000.0	68000.0	75000.0	79000.0	82000.0	92000.0	120000.0	145800.0	291,566.0	310,397.0

[Notes]:

1. The data of aquaculture production are entered by japonica and other eel species, respectively
2. Unit for aquaculture production should be weight (kilograms or metric tons) as far as possible.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Aquaculture production data should be the calendar year.

Comments by Members:

1. China Fishery Statistical Yearbook on aquaculture production are only available up to 2023, totaling 291,566 tons; data for 2024 is not currently available.
2. Detailed aquaculture production figures disaggregated by eel species are difficult to obtain, only overall production data is available.

Format 5: Other data on aquaculture

Item	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023-24	2024-25
Scale of aquaculture industry	number of aquaculture operators	465	558	687	696	772	797	830	868	918	925	1004	1100	1280	-

[Notes]:

- ①Unit for scale of aquaculture industry may include the number of aquaculture operator or the dimensions of aquaculture ponds.
- ②When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.

Comments by Members:

1. Due to inconsistent statistical standards among eel farms, this information is unavailable.

Format 6: Import of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2024	2024-25
japonica	glass eel	kg												-	-	
	eel fry (kuroko)	kg												-	-	
Total		kg												-	-	
Other eel species	glass eel	kg	14,500.0	20,000.0	32,000.0	35,500.0	39,500.0	36,000.0	33,000.0	33,500.0	35,000.0	29,000.0	28,000.0	34000		
	eel fry (kuroko)	kg												-	-	
Total		kg	14,500.0	20,000.0	32,000.0	35,500.0	39,500.0	36,000.0	33,000.0	33,500.0	35,000.0	29,000.0	28000.0	34,000.0	34,408.0	-

[Notes]:

1. The data of import of eel seeds (glass eels and eel fry) are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (import of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.)
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members:

1. Information does not differentiate between eel species.
2. Chinese customs statistics are typically compiled on an annual cycle; thus, import data for the 2024–2025 season is unavailable, with only the 2024 data accessible.

Format 7: Import of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023-24	2024-25
japonica	live eel	kg or tons														
	broiled eel	kg or tons														
Other eel species		kg or tons														
		kg or tons														
Total		kg or tons														

[Notes]:

- ① The data of import of eel and eel products are entered by japonica and other eel species, respectively
- ② Examples of type/size of import of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
- ③ When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- ④ Unit for import of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members:

Format 8: Export of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
japonica	glass eel	kg	19000.0	14000.0	9500.0	10000.0	11200.0	12800.0	10000.0	11500.0	8000.0	5000.0	12000.0	13300	15,000.0	-
	eel fry (kuroko)	kg											-	-	-	-
Total		kg	19000.0	14000.0	9500.0	10000.0	11200.0	12800.0	10000.0	11500.0	8000.0	5000.0	12000.0	13,300.0	15,000.0	-
Other eel species	glass eel	kg														-
	eel fry (kuroko)	kg														-
Total		kg														1,150.00

【Notes】:

1. The data of export of eel seeds are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (export of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members:

1. Information does not differentiate between eel species.

Format 9: Export of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024-25
japonica	live eel	kg or														
	broiled eel	kg or														
Other eel species		kg or														
		kg or														
Total		tons	36,398.0	33,917.0	35,001.0	40,295.0	41,426.0	42,357.0	/	46,732.0	52,432.0	69,917.0	64,200.0	66,660.0	-	
japonica/Other eel species (Data on Japanese eel and other eels are	live eel	tons	3,846.0	5,295.0	5,818.0	5,562.0	6,219.0	6,781.0	/	7,508.0	9,630.0	10,107.0	14,100.0	17,159.0	15,009.9	
	broiled eel	tons	32,552.0	28,622.0	29,183.0	34,733.0	35,207.0	35,576.0	/	39,224.0	42,802.0	59,810.0	50,100.0	49,501.0	-	

【Notes】:

1. The data of export of adult eel and eel products are entered by japonica and other eel species, respectively
2. Examples of type/size of export of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for export of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members:

1. Processed products including broiled eel (whole or in pieces), with broiled eel unspecified. Prepared or preserved eel is 52,360 tons.

Format 10. Mean value of weight and length of Japanese eel

	Unit	When catching	When inputting into aquaculture ponds	When importing	When exporting
glass eel	weight (g)				
	body length (cm)				
eel fry	weight (g)				
	body length (cm)				
adult eel	weight (g)				
	body length (cm)				

【Notes】:

1. The data of weight and length of Japanese eel into aquaculture ponds are entered by glass eel, eel fry and adult eel, respectively.
2. The data entered can be either mean value or figures in certain ranges (e.g., XX – YYg or cm). If mean value is available, it should be clearly mentioned in the comments by Members that the mean value of weight and length figures are based on biological or administrative standards or figures obtained from industry associations, etc.
3. When there are no relevant data or data is not available, “-” should be entered. When data is identified as zero, “0” should be entered.
4. “Body length” is the length of a fish measured from the tip of the snout to the posterior end of the last vertebra.

○Comments by Members:

●Data Sources and/or Methods to collect or estimate the data

(* Please fill in data sources and/or methods to collect or estimate the data entered in from format 1 to format 14 respectively.)

1. Catch of glass eel	The data is estimated in every fishing period (from October to May of next year) by adding the amount of export of glass eels to the amount of input of glass eels into aquaculture ponds by some local eel farming association. The data from 2023 is sourced from the China Fishery Statistical Yearbook.
2. Catch of eel fry (kuroko)	-
3. Catch of wild adult eel	There is no catch of adult eel in China.
4. Fishing effort on glass eel	
5. Fishing effort on eel fry (kuroko)	-
6. Fishing effort on wild adult eel	There is no catch of adult eel in China.

7. Input of eel seeds into aquaculture ponds	The data is based on the information from local eel farming association of the major eel production provinces.
8. Aquaculture production	The data is based on the information from local eel farming association of the major eel production provinces. The data from 2023 is sourced from the China Fishery Statistical Yearbook.
9. Scale of aquaculture industry	The data is collected and estimated on the information from local eel farming association of the major eel production provinces.
10. Import of eel seeds	The data is based on the information from customs, fishery statistics and relevant industry associations.
11. Import of eel and eel products	The data is based on the information from customs, fishery statistics and relevant industry associations.
12. Export of eel seeds	The data is based on the information from customs, fishery statistics and relevant industry associations.
13. Export of eel and eel products	The data is based on the information from customs, fishery statistics and relevant industry associations.
14. Mean value of weight and length of Japanese eel	

附件 29 各國鰻魚資源保育措施

Summary Table of Conservation and Management Measures for Eels (China)

IC18

Eel aquaculture		Description
Condition of eel aquaculture business	none ☒ license required	
Ground for license, etc. ※	Legislation ☒ Other scheme	Name of Legislation/other scheme requiring licenses: Decree of the Ministry of Agriculture of the People's Republic of China "Measures for License Issuance and Registration of Aquaculture in Water Areas and Tidal Flats"
Management body	Fisheries Agency	
Contents of management measures		
① Upper limit for the number of licenses	Central/By local authority ☒ None	License holders: company ☒ facility ☒ others () Data not available
② Upper limit for scale of facilities	☒ Yes ☒ No	
③ Upper limit for input of <i>Anguilla japonica</i>	Central/By local authority/By individual ☒ None	This measure will be further considered for future Informal Consultations including complementary measures, possibly taking into account scientific advice from the Scientific Meeting.
④ Upper limit for input of other eels	Central/By local authority/By individual ☒ None	This measure will be further considered for future Informal Consultations including complementary measures, possibly taking into account scientific advice from the Scientific Meeting.
⑤ Size limit for input glass eels	Central/By local authority ☒ None	Description of regulation:
⑥ Time closure of glass eels input	Central/By local authority ☒ None	Description of regulation:
⑦ Other regulation	Central/By local authority ☒ None	Description of regulation:
⑧ Body to manage and monitor input of glass eels	Prefectural or provincial eel association	Monitoring measure: Farmers shall report their input amount to the prefectural or provincial eel association by the end of glass eel input.
⑨ Body to manage and monitor production amount	Prefectural or provincial eel association	Monitoring measure: Farmers shall report their production amount to the prefectural or provincial eel association every year.
⑩ Penalty	☒ Yes ☒ No	Penalty for aquaculture operation without licenses: Prohibition of aquaculture
Voluntary measures by industry		

Glass eel fishery		Description
Condition of glass eel fishery	none ☒ license required	
Ground for license, etc. ※	Legislation ☒ Other scheme	Name of Legislation/other scheme requiring licenses : Notice on strengthening the management of eel fry fishing in the Yangtze Estuary no catch management zone and adjacent waters in 2022
Management body	Local authority	
Contents of management measures		License holders: individual/association/others (): From January 1, 2021, the issuance of special fishing licenses for eel fry in the waters within the Yangtze River Estuary has been ceased. At the same time, it is stipulated that in the fishable waters, the number of special fishing licenses for glass eel in 2022 shall not exceed that of 2021, the number of net gear per license shall not exceed 100, and the number of net openings per net gear shall not exceed 1.
① Upper limit for the number of licenses	Central ☒ By local authority ☒ None	Description of regulation: From January 1, 2021, the issuance of special fishing licenses for eel fry in the waters within the Yangtze River Estuary has been ceased. At the same time, it is stipulated that in the fishable waters, the number of special fishing licenses for glass eel in 2022 shall not exceed that of 2021.
② Regulation on fishing gear	☒ Yes ☐ No	Description of regulation: The number of net gear per license shall not exceed 100, and the number of net openings per net gear shall not exceed 1.
③ Upper limit for catch	Central/By local authority/By individual ☒ None	Description of limit:
④ Size limit	Central/By local authority ☒ None	Description of limit:
⑤ Time closure of glass eel catch	Central ☒ By local authority ☒ None	Description of regulation: In several coastal fishing provinces, fishing is allowed from the beginning of November to the end of April of the next year.
⑥ Body to manage and monitor catch amount	Local authority	Monitoring measures: Fishers shall report catch data to the local authority and local authorities may report data to the Fishery and Fisheries Administration of the Ministry of Agriculture and Rural Areas.
⑦ Penalty	☒ Yes ☐ No	Penalty for fishing operation without licenses: In case of gross violation (using the net with a mesh size less than 2.5 cm), criminal responsibility will be investigated according to the law ☐ less than 3 years of imprisonment.
Voluntary measures by industry		

Adult eel fishery		Description
Condition of adult eel fishery	☒ None ☐ License required	
Ground for license, etc. ※	Legislation/Other scheme	Name of Legislation/other scheme requiring licenses:
Management body	Local authority	
Contents of management measures	Yes ☒ No ☐	License holders: individual/association/others() Total number of licenses issued: Number of fishers:
① Upper limit for the number of licenses	Central/By local authority ☒ None ☐	Description of regulation:
② Regulation on fishing gear	Yes ☒ No ☐	Description of regulation:
③ Upper limit for catch	Central/By local authority/By individual ☒ None ☐	Description of limit:
④ Size limit	Central/By local authority ☒ None ☐	Description of limit:
⑤ Time closure	Central/By local authority ☒ None ☐	Description of regulation:
⑥ Body to manage and monitor catch amount		Monitoring measures:
⑦ Penalty	Yes ☒ No ☐	Penalty:
Voluntary measures by industry		

Additional information

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Summary Table of Conservation and Management Measures for Eels (Japan)

Eel aquaculture		Description
Condition of eel aquaculture business	none license required	
Ground for license, etc. ※	Legislation/Other scheme	Name of Legislation/other scheme requiring licenses : Inland Water Fishery Promotion Act enacted on June 27, 2014 and Order for enforcement of Inland Water Fishery Promotion Act established on October 1st 2014. Establishment date: June 27, 2014
Management body	Fisheries Agency	
Contents of management measures		
① Upper limit for the number of licenses	Central/By local authority/None	License holders: company/facility/others () Total number of Licenses issued: 442 for <i>A. japonica</i> , 103 for eels other than <i>A. japonica</i> (November 2024 - October 2025, as of November 1, 2024)
② Upper limit for scale of facilities	Yes/No	Description of regulation: total area of aquaculture ponds written in a permit.
③ Upper limit for input of <i>Anguilla japonica</i>	Central/By local authority/By individual/None	The quota for each individual farmer is set within the total upper limit. Total upper limit for <i>A. japonica</i> is 21.7 tons.
④ Upper limit for input of other eels	Central/By local authority/By individual/None	The quota is set for each individual farmer within the total upper limit. Total upper limit for eels other than <i>A. japonica</i> is 3.5 tons.
⑤ Size limit for input glass eels	Central/By local authority/None	Description of regulation:
⑥ Time closure of glass eels input	Central/By local authority/None	Description of regulation:
⑦ Other regulation	Central/By local authority/None	Description of regulation: - When farmers sell their farmed eels to other farmers' aquaculture operation, sellers shall provide the document about trade records to buyers. - In case farmers conduct aquaculture operation of eels other than <i>A. japonica</i> , they are prohibited to release the eels to waters outside of their facility. The farmers shall take necessary measures to prevent their escape.
⑧ Body to manage and monitor input of glass eels	Fisheries Agency	Monitoring measure: Farmers shall report their input amount to the Fisheries Agency every month.
⑨ Body to manage and monitor production amount	Fisheries Agency	Monitoring measure: Farmers shall report their production amount to the Fisheries Agency every month.
⑩ Penalty	Yes/No	Penalty for aquaculture operation without licenses: Less than 3 years of imprisonment or a penalty of less than 2 million yen
Voluntary measures by industry		

Glass eel fishery		Description
Condition of glass eel fishery	none/ <u>license required</u>	
Ground for license, etc. ※	<u>Legislation</u> /Other scheme	Name of Legislation/other scheme requiring licenses: Prefectural Fisheries Coordination Regulation based on the Fisheries Act and the Act on the Protection of Fisheries Resources
Management body	Local authority	
Contents of management measures		License holders: <u>individual</u> / <u>association</u> /others () Total number of licenses issued: 7,321 Number of fishers: 15,406 (2023-2024 fishing season)
① Upper limit for the number of licenses	Central/ <u>by local authority</u> /None	Description of regulation: License holders are limited to Fisheries Associations, members of Fisheries Associations, eel farmers and so on.
② Regulation on fishing gear	<u>Yes</u> /No	Description of regulation: Limitation of fishing gears and fishing types are introduced in each prefecture.
③ Upper limit for catch	Central/ <u>by local authority</u> / <u>by individual</u> /None	Description of limit: Catch quota is set based on historical catch amount, area of aquaculture pond and so on.
④ Size limit	Central/ <u>by local authority</u> /None	Description of limit: Size limit is introduced in each prefecture.
⑤ Time closure of glass eel catch	Central/ <u>by local authority</u> /None	Description of regulation: In many fishing grounds, fishing is allowed from December to April in the following year.
⑥ Body to manage and monitor catch am	Local authority	Monitoring measures: Fishers shall report catch data to the local authority and local authorities may report data to the Fisheries Agency.
⑦ Penalty	<u>Yes</u> /No	The penalty for catching glass eels without a fishing permit will be an imprisonment of up to 3 years or a fine of not more than 30 million yen.
Voluntary measures by industry		

Adult eel fishery		Description
Condition of adult eel fishery	none <u>license required</u>	
Ground for license, etc. ※	<u>Legislation</u> Other scheme	Name of Legislation/other scheme requiring licenses: Prefectural Fisheries Coordination Regulation and other regulations based on the Fisheries Act and the Act on the Protection of Fisheries Resources
Management body	Local authority	
Contents of management measures	<u>Yes</u> No	License holders: <u>individual</u> association/others () Total number of licenses issued: Number of fishers:
① Upper limit for the number of licenses	Central/By local authority/ <u>None</u>	Description of regulation:
② Regulation on fishing gear	<u>Yes</u> No	Description of regulation: Limitation of fishing gears and fishing types are introduced in each Prefectures.
③ Upper limit for catch	Central/By local authority/By individual/ <u>None</u>	Description of limit:
④ Size limit	Central/ <u>By local authority</u> /None	Description of limit: Size limit is introduced in each prefecture. Lower size limit is 20cm - 30cm in most regions
⑤ Time closure	Central/ <u>By local authority</u> /None	Description of regulation: Time closure is introduced in each prefecture, mainly from October to March when eels migrate from river to sea for spawning.
⑥ Body to manage and monitor catch amount		Monitoring measures:
⑦ Penalty	<u>Yes</u> No	Penalty: Less than 6 months of imprisonment or a penalty of less than 100,000 yen for violation of Regional Fisheries Coordination Regulation. Less than 1 year of imprisonment or a penalty of less than 500,000 yen for violation of Instruction by Fisheries Adjustment Commission.
Voluntary measures by industry		In July 2018, National Federation of Inland Waters Fishing Ground Management Commissions and National Federation of Inlandwater Fisheries Cooperatives jointly adopted the resolution on promoting nationwide conservation of eels migrating from river to sea for spawning.

Additional information

Summary Table of Conservation and Management Measures for Eels (Korea)

Eel aquaculture		Description
Condition of eel aquaculture business	none/ <u>license</u> required	Article 43 of the Aquaculture Industry Development Act (Authorization of farming) stipulates that eel farming is subject to authorization (enacted on August 27, 2019 and took effect on August 27, 2020)
Ground for license, etc. ※	<u>Legislation</u> /Other scheme	Article 43 of the Aquaculture Industry Development Act (Authorization of farming) stipulates that eel farming is subject to authorization (enacted on August 27, 2019 and took effect on August 27, 2020)
Management body	System management: Inland Fishery Industry Team, Aquaculture Industry Division, Ministry of oceans and Fisheries	Acceptance of a report: Local authority
Contents of management measures		
① Upper limit for the number of licenses	Central/By local authority/ <u>None</u>	License holders: company/facility/ <u>Others (Individual)</u> Total number of reports: 614 as of 2024
② Upper limit for scale of facilities	Yes/ <u>No</u>	Description of regulation:
③ Upper limit for input of <i>Anguilla japonica</i>	Central/By local authority/ <u>By individual</u> /None	Fresh Water Eel Culture Fisheries Cooperative composed of eel farmers self-regulates the input: Upper limit for <i>A. japonica</i> input is set at 11.1 tons.
④ Upper limit for input of other eels	Central/By local authority/ <u>By individual</u> /None	Fresh Water Eel Culture Fisheries Cooperative composed of eel farmers self-regulates the input: Upper limit for input of eels other than <i>A. japonica</i> is set at 14.0 tons in total.
⑤ Size limit for input glass eels	Central/By <u>local authority</u> /None	Description of regulation: Fisheries Resource Management Act article 35, Enforcement Decree article 18, Enforcement Regulation article 17 / a glass eel to weigh below 0.3 grams
⑥ Time closure of glass eels input	Central/By local authority/ <u>None</u>	Description of regulation:
⑦ Other regulation	Central/By local authority/ <u>None</u>	Description of regulation:
⑧ Body to manage and monitor input of glass eels	Fresh Water Eel Culture Cooperatives	Monitoring measure: Fresh Water Eel Culture Fisheries Cooperative investigate by farm
⑨ Body to manage and monitor production amount	Fresh Water Eel Culture Cooperatives	Monitoring measure: legislation to be enacted through amendment of "Fishery products distribution management and support Act" (2 Dec 2016) and Enforcement regulations (Jun 2017) to distribute eels at designated locations.
⑩ Penalty	<u>Yes</u> /No	Penalty for aquaculture operation without license: penalty of maximum 5 million won Penalty for excess of input limit: None If not distributed at the designated place: imprisonment of 2 years or less or fine of 20 million won or less
Voluntary measures by industry		Compliance with the "Joint Statement" agreed by the Informal Eel meeting participants

Glass eel fishery		Description
Condition of glass eel fishery	none license required	Approval required/ Inland Water Fishery Act, Fisheries Act
Ground for license, etc. ※	Legislation/Other scheme	Name of Legislation/other scheme requiring licenses: Fisheries Act Article 41.3 (glass eel stow-net fishery), Inland Water Fishery Act Article 9(Inland Water seed harvest approval) Establishment date or estimated date to be established: Fisheries Act enforced 23 Apr 2010, Inland Water Fishery Act enforced 29 Jul 2000 (approval required since Inland Water Fisheries Development Promotion Act(09 Jul 1976))
Management body	System Management: Inland Fishery Industry Team, Aquaculture Industry Division, Ministry of oceans and Fisheries	Approval: Local authority
Contents of management measures		License holders: individual /association/others () Total number of licenses issued: Number of approval: 517(the total number including not only glass eel but all other seed capture) as of 2022
① Upper limit for the number of licenses	Central/By local authority None	Description of regulation:
② Regulation on fishing gear	Yes /No	Description of regulation: glass eel stow-net fishery(Enforcement Decree of the Fisheries Act Article 23)
③ Upper limit for catch	Central/By local authority/By individual None	Description of limit:
④ Size limit	Central/By local authority None	Description of limit:
⑤ Time closure of glass eel catch	Central/By local authority None	Description of regulation:
⑥ Body to manage and monitor catch and	Central and local authority	Monitoring measures: controlling unauthorized captures of glass eels
⑦ Penalty	Yes /No	Penalty for fishing operation without licenses: Less than 1 years of imprisonment or a penalty of less than 10 million won
Voluntary measures by industry		

※ Attach the legal text, if there is an English version.

Adult eel fishery		Description
Condition of adult eel fishery	none/license required	Approval required
Ground for license, etc. ※	legislation/Other scheme	Name of Legislation/other scheme requiring licenses: Inland Water Fishery Act Article 6, 9 and 11 Establishment date or estimated date to be established: Inland Water Fishery Act(29 Jul 2000)
Management body	System Management: Inland Fishery Industry Team, Aquaculture Industry Division, Ministry of oceans and Fisheries	Approval: Local authority
Contents of management measures		License holder: <u>individual</u> /association/others () Total number of licenses issued: Number of fishers: Approval is issued not by fish species but by type of fishing gears, thus, the exact number cannot be confirmed.
① Upper limit for the number of licenses	Central/By local authority/ <u>None</u>	Description of regulation:
② Regulation on fishing gear	<u>Yes</u> /No	Description of regulation: pound net, longline, fish trap
③ Upper limit for catch	Central/By local authority/By individual/ <u>None</u>	Description of limit:
④ Size limit	<u>Central</u> /By local authority/None	Description of limit: 15cm~45cm
⑤ Time closure	<u>Central</u> /By local authority/None	Description of regulation: six months closure(1 October ~ 31 March)
⑥ Body to manage and monitor catch and effort	Central and local authority	Monitoring measures: controlling unauthorized captures of adult eels
⑦ Penalty	<u>Yes</u> /No	Penalty for fishing operation without licenses: Less than 1 years of imprisonment or a penalty of less than 10 million won
Voluntary measures by industry		

※ Attach the legal text, if there is an English version.

Additional information

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Summary Table of Conservation and Management Measures for Eels (Chinese Taipei)

Eel aquaculture		Description
Condition of eel aquaculture business	none license required	
Ground for license, etc. ※	Legislation/Other scheme	Name of Legislation/other scheme requiring licenses: Regulations for Input Management of Eel Aquaculture Establishment date or estimated date to be established: November 14, 2014
Management body	Ministry of Agriculture	
Contents of management measures		
① Upper limit for the number of license	Central/By local authority/None	License holders: company/facility/others (Eel farmer) Total number of Licenses issued: 312 licenses in 2024-2025
② Upper limit for scale of facilities	Yes/No	Description of regulation:
③ Upper limit for input of <i>Anguilla japonica</i>	Central/By local authority/By individual/None	
④ Upper limit for input of other eels	Central/By local authority/By individual/None	
⑤ Size limit for input glass eels	Central/By local authority/None	Description of regulation:
⑥ Time closure of glass eels input	Central/By local authority/None	Description of regulation:
⑦ Other regulation	Central/By local authority/None	Description of regulation:
⑧ Body to manage and monitor input of glass eels	Fisheries Agency/ Local authority/Taiwan Eel Farming Industry Development Foundation/Local eel farmer	Monitoring measure: The eel farmer should report the input amount of eel within 10 days after inputting eel.
⑨ Body to manage and monitor product	Fisheries Agency/ Local authority/Taiwan Eel Farming Industry Development Foundation/Local eel farmer	Monitoring measure: The eel farmer's production should not exceed the input amount.
⑩ Penalty	Yes/No	Penalty for aquaculture operation without licenses: A fine of between NTD\$ 30,000 and NTD\$ 150,000. Penalty for excess of input limit: A fine of between NTD\$ 30,000 and NTD\$ 150,000.
Voluntary measures by industry		

Glass eel fishery		Description
Condition of glass eel fishery	none <u>license required</u>	Most of the catching glass eels are from fishing vessel, so main management measures are for vessel. Vessels approved by
Ground for license, etc. ※	<u>Legislation</u> /Other scheme	Name of Legislation/other scheme requiring licenses: Fisheries Act/Regulations on the Restricted Fishing Seasons for Elvers/ Directions of the coastal Elvers Fishing Establishment date or estimated date to be established: Existing legislation/September 9, 2013/ November 27, 2013
Management body	Ministry of Agriculture/Local government	
Contents of management measures		License holders: individual/association/ <u>others</u> (Vessel) Total number of licenses issued: <u>305</u> Number of fishers: 305
① Upper limit for the number of license	<u>Central/By local authority</u> None	Description of regulation: Vessels approved by the central or municipal competent authorities for operating the "fishing fry" fishery are allowed to use fishing gear such as scraping nets and stow nets to catch glass eelseels (Fisheries Act Article 6 and 9).
② Regulation on fishing gear	<u>Yes</u> No	Description of regulation: Scraping nets and stow net driven by vessel.
③ Upper limit for catch	Central/By local authority/By individual <u>None</u>	Description of limit:
④ Size limit	Central/By local authority/ <u>None</u>	Description of limit:
⑤ Time closure of glass eel catch	<u>Central</u> /By local authority/None	Description of regulation: Between March 1 and October 31 every year.
⑥ Body to manage and monitor catch amount	By local authority and local fishermen's association	Monitoring measures: The glass eel fishermen are advised to report the catch amount to local fishermen's association.
⑦ Penalty	<u>Yes</u> No	Penalty for fishing operation in time closure: A fine of between NTDS 30,000 and NTDS 150,000.
Voluntary measures by industry		

※ Attach the legal text, if there is an English version.

Adult eel fishery		Description
Condition of adult eel fishery	☒ none ☐ license required	
Ground for license, etc. ※	Legislation ☒ Other scheme	Name of Legislation/other scheme requiring licenses : "Fishing bans and closed seasons" area Establishment date or estimated date to be established : Since 2013
Management body	Local authority	
Contents of management measures		License holders: individual/association/others () Total number of licenses issued: Number of fishers:
① Upper limit for the number of license	Central/By local authority ☒ None	Description of regulation:
② Regulation on fishing gear	☒ Yes ☐ No	Description of regulation: According to each management measures of "fishing bans and closed seasons" area, it is forbidden to catch aquatic animals in any way or with nets.
③ Upper limit for catch	Central/By local authority/By individual ☒ None	Description of limit:
④ Size limit	Central ☒ By local authority ☐ None	Description of limit: Excess of the length of 8cm elver
⑤ Time closure	Central ☒ By local authority ☐ None	Description of regulation: The entire year in closed eel fishing area.
⑥ Body to manage and monitor catch amount	By local authority	Monitoring measures: Prohibited the catch of young and adult eels in 41 rivers in Taiwan.
⑦ Penalty	☒ Yes ☐ No	Penalty for fishing operation in "fishing bans and closed seasons" area: A fine of between NTD\$ 30,000 and NTD\$ 150,000.
Voluntary measures by industry		

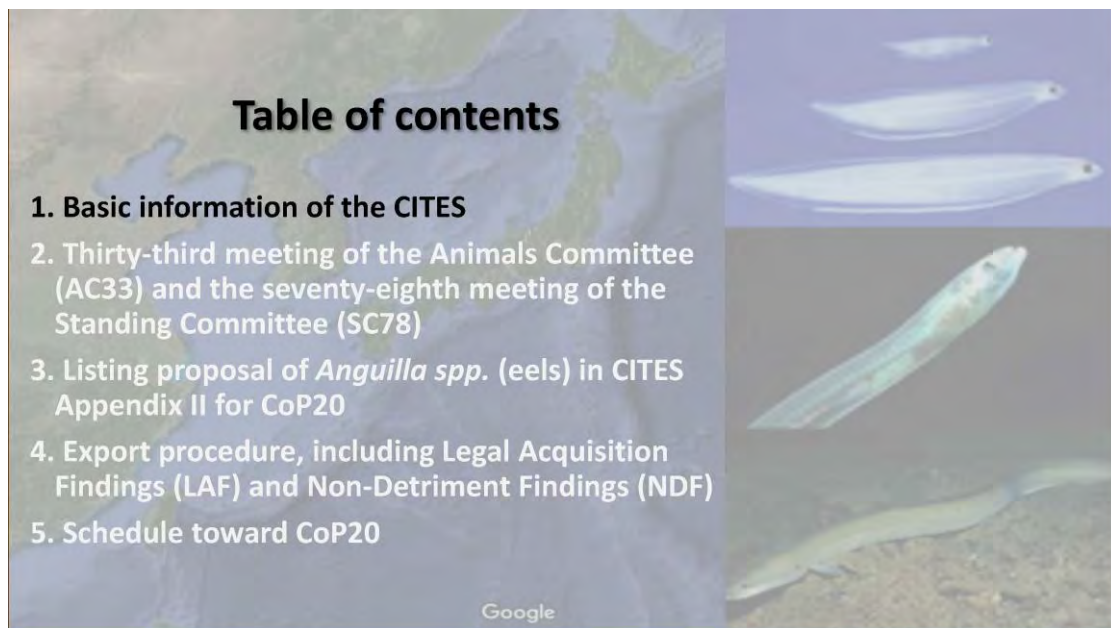
※ Attach the legal text, if there is an English version.

Additional information

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Discussion on the Japanese eel and other relevant eels at the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

Fisheries Agency of Japan
March 2025



(1) What is CITES?

● Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

● Purpose: “Ensure that international trade in specimens of wild animals and plants does not threaten their survival”

- 185 member countries (including EU)
- Conference of the Parties (CoP) : Every 2 or 3 years.
 - CoP 19 : Panama, 14-25 November 2022
 - CoP 20 : Samarkand, Uzbekistan, 24 November -5 December 2025

3

(2) CITES Appendices

- **Appendix I** includes species threatened with extinction which are or may be affected by trade.

⇒Any commercial trades are prohibited.

- **Appendix II** includes species not necessarily threatened with extinction, but whose trade must be strictly regulated in order to avoid utilization incompatible with their survival.

⇒Any commercial trades require an export permit from national CITES authority.

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(3) Export permit in accordance with CITES

An export permit may be issued only if the specimen was **legally obtained** and if the export will **not be detrimental to the survival of the species**.



5

(4) Reservation

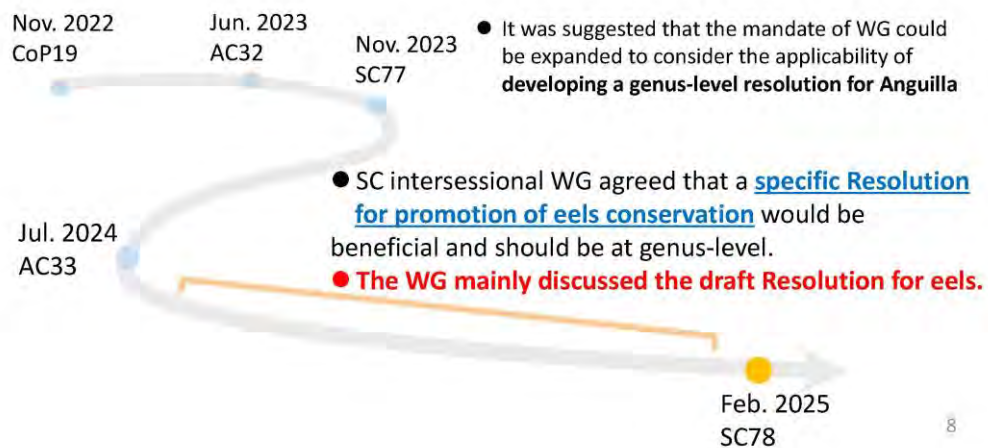
Any State may enter a specific reservation with regard to any species included in Appendix I, II or III.

	If a Party enters reservation...	Species that Japan has entered reservations
Appendix I	The party treat the species as if it were included in Appendix II for all purposes.	Humpback whale, sperm whale etc.,
Appendix II	The party shall be treated as a State not a Party to the CITES .	Shortfin mako, blue shark, oceanic whitetip shark, whale shark, seahorses etc.,

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(1) Intersessional working group on Eels



(2) Discussion in the 78th Meeting of the Standing Committee

3-8 February 2025, Geneva (Switzerland).

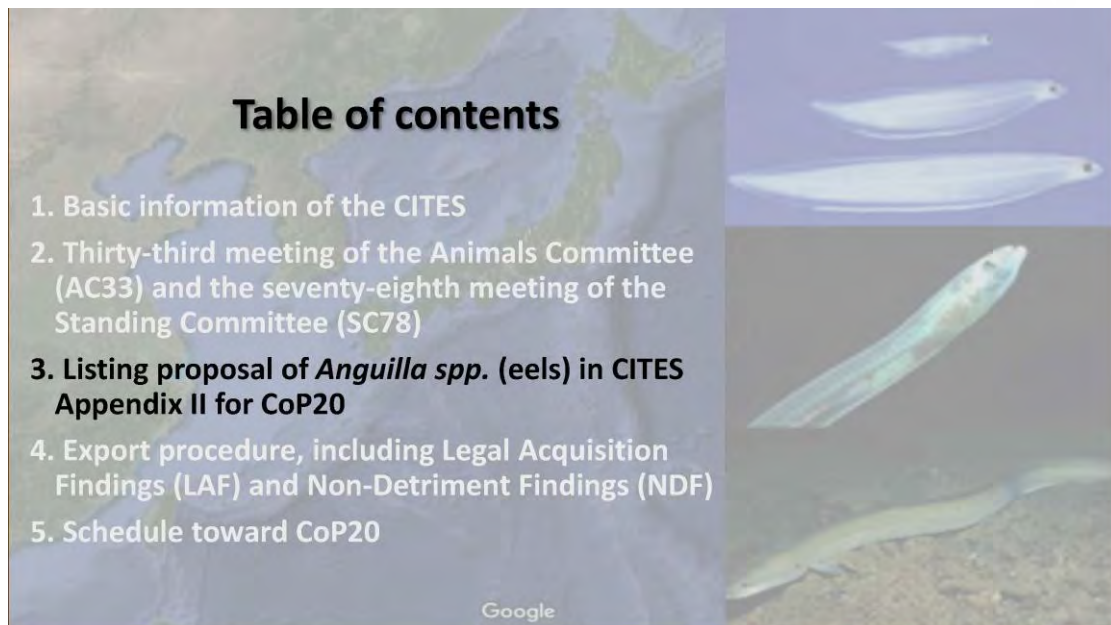
- **The Committee agreed that consensus could not be achieved.**

- The draft resolution on anguillid eel species (Inf 08) with some amendments will be submitted for consideration by the CoP20.

- Some Parties proposed that provisions of the Resolution should distinguish between CITES listed European eel and non-listed eel species as well as the wording "urges" is not appropriate for non-listed species.

- Some Parties expressed the challenges of the implementation of the provisions in the draft Resolution.

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Consultation with 69 range States of eel species by EU

- The European Commission issued the Note of consultation with 69 range States of eel species for consideration of the possible listing proposal of *Anguilla* spp. (eels) in CITES Appendix II



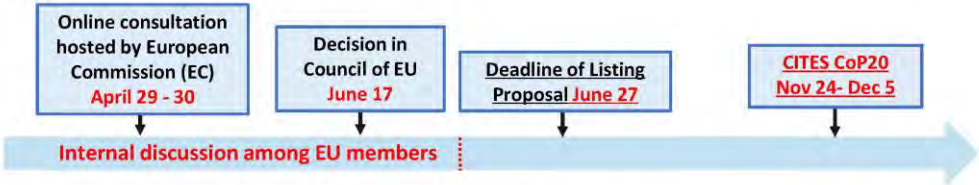
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EU’s draft listing proposal of *Anguilla* spp. (eels) in CITES Appendix II for CoP20

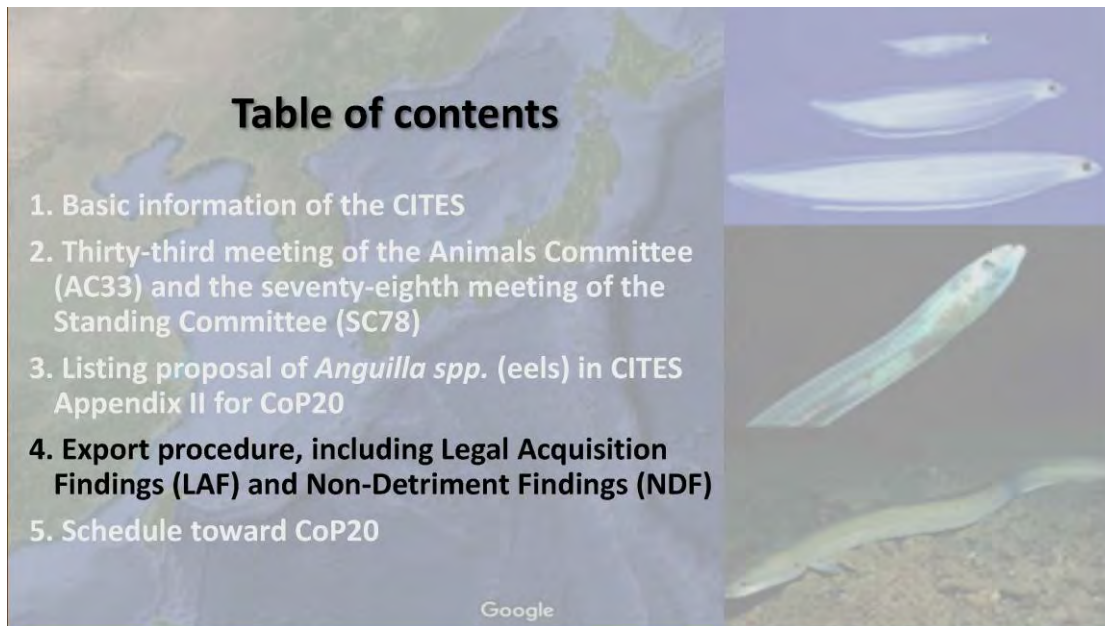
	Common name	Scientific name	proponents	Appendix	Note
1	Freshwater eels	<i>Anguilla</i> spp.	EU	II	Approximately 18 species (except European eel (<i>A. anguilla</i>))



- EU is internally considering submission of a proposal to list *Anguilla* spp. at genus-level in CITES Appendix II.



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(1) Legal acquisition findings (LAF)

- Export permit shall only be granted when a Management Authority of the State of export is satisfied that the specimen was not obtained in contravention of the laws of that State for the protection of fauna and flora.
- The finding that a Management Authority shall make is referred to as a **legal acquisition finding (LAF)**.

Provisions of the Convention

- [Article III paragraph 2 \(b\)](#)
for specimens of Appendix I species
- [Article IV paragraph 2 \(b\)](#)
for specimens of Appendix II species
- [Article V paragraph 2 \(a\)](#)
for specimens of Appendix III species

Resolutions and Decisions

- [Resolution Conf. 18.7 \(Rev. CoP19\)](#) on Legal Acquisition Findings
- [Rapid Guide for the making of legal acquisition findings](#)

Other Resolutions and Decisions referring to or providing guidelines on legal acquisition findings:

- [Decisions 19.128 to 19.131](#) on Legal acquisition findings
- [Decisions 19.222-227](#) on Sharks and rays (Elasmobranchii spp.)
- [Resolution Conf. 14.6 \(Rev. CoP16\)](#) Introduction from the sea
- [Resolution Conf. 12.3 \(Rev. CoP19\)](#) Permits and certificates
- [Resolution Conf. 11.3 \(Rev. CoP19\)](#) Compliance and enforcement

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(2) Practical steps for the verification of legal acquisition

To verify legal acquisition, the Management Authority should ;

Review all the documentary and information presented by the applicant.

- The documentation should, to the extent practicable, provide information on the entire **chain of custody** back to the source of the specimen.
- Such information may include following records;
 - a. demonstrating that the specimen was removed from the wild in accordance with relevant laws (licenses, collections permits, etc. etc.),
 - b. identifying the specific specimen (band numbers or other marks, etc.),
 - c. documenting the history of transfers of ownership (sales, receipts, invoices, etc.)
 - d. showing that the specimen was reared at a particular facility.

If a Management Authority is satisfied that the specimen was legally acquired from all relevant information, the requirement of verification of legal acquisition is fulfilled.

(3) Non-detriment findings (NDF)

- Export permits for specimens of species included in Appendices I and II shall be granted only when a Scientific Authority of the State of export has advised that such export will not be detrimental to the survival of the species.
- The following determination is known as a **non-detriment finding (NDF)**.

Provisions of the Convention

- [Article III paragraph 2 \(b\) and 3 \(a\)](#) for specimens of Appendix I species
- [Article IV paragraph 2 \(b\)](#) for specimens of Appendix II species
- [Article III paragraph 5 \(a\) and VI paragraph 6 \(a\)](#) for specimens of introduction from the sea

Resolutions and Decisions

- [Resolution Conf. 10.3](#) on Designation and role of the Scientific Authorities
- [Resolution Conf. 16.7 \(Rev. CoP17\)](#) Non-detriment findings
- [Resolution Conf. 13.2 \(Rev. CoP14\)](#) Sustainable use of biodiversity: Addis Ababa Principles and Guidelines
- [Resolution Conf. 14.7 \(Rev. CoP15\)](#) Management of nationally established export quotas
- [Decisions 19.132 - 19.134](#) Non-detriment findings

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CITES NDF guidance

- [Module 1](#) Principles and concepts of NDFs
- [Module 2](#) Practical considerations for making NDFs
- [Module 5](#) NDFs for aquatic species

(4) Practical steps for non-detriment findings

Parties or non-Parties may refer the following materials for NDF;

Resolution Conf. 16.7 (Rev. CoP17) Non-detriment findings

- Concept and non-binding guiding principles for NDF, including assessment methodology (species biology and life-history characteristics, population structure, status and trends, population monitoring, management measures etc.

CITES NDF guidance

- In the CITES NDF project, Parties, observers and independent experts developed a non-binding NDF guidance.

(5) Japan's draft NDF for the Japanese eel

Outline of Japan's draft NDF (IC18 Inf.11)

Based on NDF Guidelines for Aquatic Species by the Fisheries Agency of Japan ([link](#)), NDF for the Japanese eels is applicable thanks to;

- Sufficiently large effective population size (N_e): approx. 20,000 individuals, stable since 2019
- Glass eel catch is within average catch in the past (3.7-17.1t)
- National-wide continuous resource enhancement projects including followings.



Ishikura-net (86 spots in 40 rivers and 2 lakes)



Re-stocking of eels
(about 1-3 million glass eels/year + grown individuals)

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Schedule toward CoP20

Event	Date and Venue
Decision in Council of EU on submission of listing proposal	17 June 2025
The deadline for the submission of proposal to amend CITES Appendices	27 June 2025
FAO Expert Advisory Panel for the assessment of proposal to amend CITES appendices	7-11 July at Bangkok 21-25 July at Rome
The 20th meeting of the Conference of the Parties (COP20)	24 November – 5 December 2025, Samarkand (Uzbekistan)

Thank you for your attention

附件 31 致 CITES 第 20 屆締約國大會聯合聲明草案

IC18 Doc.16

Date: XX, June 2025

Joint Statement by the Fisheries Authorities of China, Japan, Republic of Korea and Chinese Taipei on the EU Proposal to list the Genus *Anguilla* (all freshwater eel species) to CITES Appendix II

Our overall position

1. The Bureau of Fisheries of People's Republic of **China**; the Fisheries Agency of **Japan**; the Ministry of Oceans and Fisheries of the **Republic of Korea**; and the Fisheries Agency of **Chinese Taipei**, as the members of the Informal Consultation on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species (hereinafter referred to as "Members"), **strongly oppose the Proposal submitted by the EU for the 20th Meeting of the Conference of the Parties of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to include all *Anguilla* species in CITES Appendix II.**

2. We are concerned that this proposal risks undermining our long-time joint conservation effort for eel resources, particularly the Japanese eel (*Anguilla japonica*), for more than a decade. Thus the proposal is unacceptable.

The rationale

3. As described in **Attachment (Slide 1-5)**, the EU proposal totally lacks scientific justification and convincing evidence.

(Slide 1) The scientific fact is that the **Japanese eel stock is sufficiently abundant**. The stock size of the Japanese eel has been **recovering** and has more than doubled since 1990. Its extinction probability is **0.02%**, which is 1/1000 of the IUCN threshold E, which is appropriate for commercial fishing. Thus the Japanese eel is not eligible for CITES listing criteria.

(Slide 2) The EU proposal argues that historical decline of glass eel catches in Japanese statistics illustrates the decline of Japanese eel stock. This is an outright error, ignoring socio-economic factors

surrounding the Japanese eel. The reduction of glass eel capture has been caused by technological innovation and the decrease in the number of aquaculture farmers, not by stock decline.

(Slide 3-4) The EU proposal argues that listing of all *Anguilla* species is a necessary measure to tackle “enforcement challenges (illegal trade)” of the critically endangered European eel (*A. Anguilla*), due to the difficulty in species identification. Such an argument is irrelevant to stock of other *Anguilla* species and baseless because of the following facts:

- Contrary to the repeated recommendations of **zero catch** for the European eel by the ICES¹, some EU member states have significantly increased their capture and aquaculture production. Free trade of European eel without NDF² is still active and ongoing among EU member states. **These facts suggest the lack of sufficient control measures for the European eel, which should be rectified first.**
- Given the Europol’s media release “*Around 100 tons of glass eels may be smuggled annually from EU Member States,*” the core issue of so-called “enforcement challenges” for the EU seem to be the outflow of European eel from EU Member States, which is **irrelevant to other *Anguilla* species.**
- It must be possible for the EU to take such measures as introducing species identification at its custom authorities. Given there is **no habitat overlap between the European and the Japanese eel**, the EU customs should be able to find out illegal trade of European eel disguised as Japanese eel reasonably. Scientific literature indicates that **species of glass eels are “morphologically identifiable”.**

(Slide 5) Genus-level listing of all *Anguilla* species would trigger a number of **serious adverse side effects:**

- Soaring price of glass eels which end up with an increased malicious poaching and smuggling.
- Negative impact on our conservation efforts through unnecessarily burdening key stakeholders with paperwork (e.g. fishers, aquaculture farmers),
- Irreparable damages on local livelihoods of fishers, including small scale aquaculture/fishers all over the world.
- Distraction of attention from other species which truly need protection, due to increased

¹ The International Council for the Exploration of the Sea

² Non Detrimental Findings: required once the species is listed in Appendix II

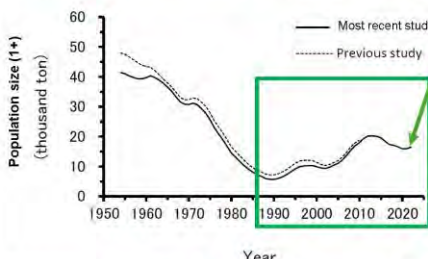
amount of paperwork (e.g. NDF) and enforcement burden, which is not necessary for the Japanese eel that is already abundant.

Conclusion

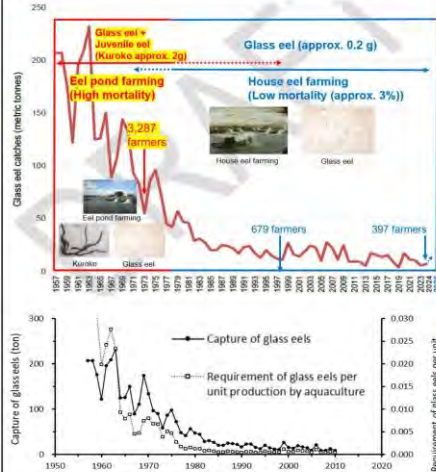
4. The Bureau of Fisheries of People's Republic of **China**, the Fisheries Agency of **Japan**, the Ministry of Oceans and Fisheries of the **Republic of Korea** and the Fisheries Agency of **Chinese Taipei**, strongly encourage **all Parties to CITES** NOT to support this unjustified EU proposal to CITES CoP20, by fully taking into account the information provided in this Joint Statement and its **Attachment**.

5. Members also strongly request **the proponent (EU)** to consider the above information and suggestion carefully and make a sound decision to withdraw the proposal.

1. Factual Information of the Japanese eel (Population size)

EU proposal	- Population has significantly decreased. It is still in decline. - Assessed in 2018 as Endangered in IUCN Red List
Factual Information	● Japanese eel is sufficiently abundant and not endangered. ① The population size has recovered since 1990 (Tanaka, 2025).  Approx. 17,000 tons of adult population size = 22% of Baseline, larger than CITES Appendix II criteria (5-20 %) = 68 million fish, increasing trend Estimated trajectories of size of stock (1 year and older) Source: Updated Stock Assessment of Japanese Eels Using Japanese Abundance Indices (Tanaka, 2025, in preparation) ② Not categorized as Endangered : Extinction risk is negligible Re-evaluated by quantitative analysis: : Less than 0.02% of extinction probability (IUCN Criterion: 20 %) *Source: Confidence Interval for Extinction Risk: Revisiting the Misconception that the Interval is too Imprecise to Be Useful (Hakoyama, in preparation)

2. Factual Information of the Japanese eel (Population size)

EU proposal	Declines of <i>Japanese eel</i> is illustrated in historical decline of glass eel catches in Japan's statistics.
Factual Information	● Decrease of glass eel capture ≠ stock decline ① Improved eel farming method reduced mortality (Eel pond farming → House eel farming) Recent lower catch is thanks to innovation ② Decrease of eel farmers : 3,287 (1973) → 397 (2023) Recent lower catch also reflects lower number of farmers (12 % of 1973) ③ Past use of heavier juvenile eel (Kuroko) Overestimation of the past catch is not properly considered in draft proposal  [Figure] Historical changes of glass eel inputs required for 1 metric ton of adult eel production by aquaculture (dotted line —○—) ⇒ Decline in glass eel capture (solid line —●—) has been driven by decrease of demand for aquaculture inputs per farmer Source: Ministry of Agriculture, Forestry and Fisheries and Fisheries Agency of Japan

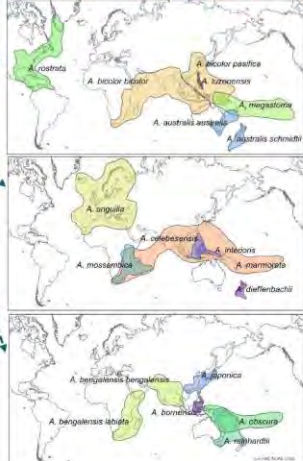
3. Factual Information on European Eel (Control Measure)

EU proposal	Enforcement challenges at customs for species identification (illegal trade of the European eel)
Factual Information	ICES repeatedly has advised ZERO CATCH of European eel. URL: https://ices-library.figshare.com/articles/report/European_eel_Anguilla_anguilla_i_t_hroughout_its_natural_range/21907860?file=49507353 ● Weakness in European eel control measure - Significant increase in capture/aquaculture production in EU members. - Active free trade of European eel among EU members without CITES export permit. Capture production France: 33 % increase Netherlands: 76 % increase Aquaculture production Germany: 146 % increase Greece: 44 % increase Source: Annex 4 of the draft proposal (FAO statistics) ○ Export of 38,000 tons from five EU members* in 2013-2022 *Netherlands, Germany, France, Denmark and Sweden ● “Enforcement challenges” are outflow of European eel from EU Member States. - Europol indicates that “Around 100 tons of glass eels may be smuggled annually from EU Member States” Source: Europol media release dated on 29 June 2023

4. Factual Information on Japanese eel (Species Identification)

EU proposal	Enforcement challenges at customs for species identification (illegal trade of the European eel)
Factual Information	① Habitat of Japanese eel is geographically and completely separated from that of European eel. No Overlap in Habitat Source: Draft proposal prepared by DG ENV to list Anguilla spp. in CITES Appendix II ② Glass eels are morphologically identifiable. It is reported that glass eels can be easily identified by the relative positions of base of the dorsal fin and the anus, and by the characteristics of the melanophores. Source: Species composition and seasonal occurrence of recruiting glass eels (Anguilla spp.) in the Hsukuehuan river, Eastern Taiwan. (Leander et al., 2014) Manual for simple species assessment of glass eels migrating to the Japanese coast and for determining the developmental stage of glass eels (Japanese eels). Tanamoto et al., 2014. (in Japanese) Guidelines for the morphological identification of glass eels endemic to East Asia and Oceania (adopted at 18th Meeting of Informal Consultation on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species)

5. Factual Information on adverse Side-Effects of CITES Listing

EU proposal	No explanation on side-effects (e.g. socio-economic impacts) of listing in CITES Appendix II
Factual Information	① Listing of <i>Anguilla</i> species would lead to a soaring price of glass eels ⇒ End up with an increased malicious poaching and smuggling ⇒ Not conducive to the conservation and management ② Genus-level listing would threaten livelihoods ⇒ Many (small-scale) fishers/aquaculture farmers <u>worldwide</u> utilize <i>Anguilla</i> species ⇒ The CITES listing would trigger wide and serious damage <i>(Excerpt from the FAO Expert Advisory Panel Report, July 2022)</i> 47. CITES Parties would well take notice that suggestions to list large “catch all” lists of look-alike species of marginal merit are likely not going to deliver conservation outcomes that are needed and may cause large socioeconomic disruption further eroding the general trust in the CITES process, especially if that socioeconomic disruption is for a species of good status that do not meet CITES criteria. Source: FAO. 2022. Report of the Seventh FAO Expert Advisory Panel for the assessment of the proposals to amend Appendices I and II of CITES concerning commercially-exploited aquatic species - Rome, 18-22 July 2022. Rome. https://doi.org/10.4060/cc1931en ③ Genus-level listing would threaten administrative functions ⇒ Increase unnecessary workloads (e.g. export permit, NDF) ⇒ Undermine conservation efforts for the species that truly need protection. <i>CITES Appendix I and II already lists approx. 1,120 and 39,440 species, respectively.</i> (Worldwide Distribution of <i>Anguilla</i> species) 



Discussion of IC17

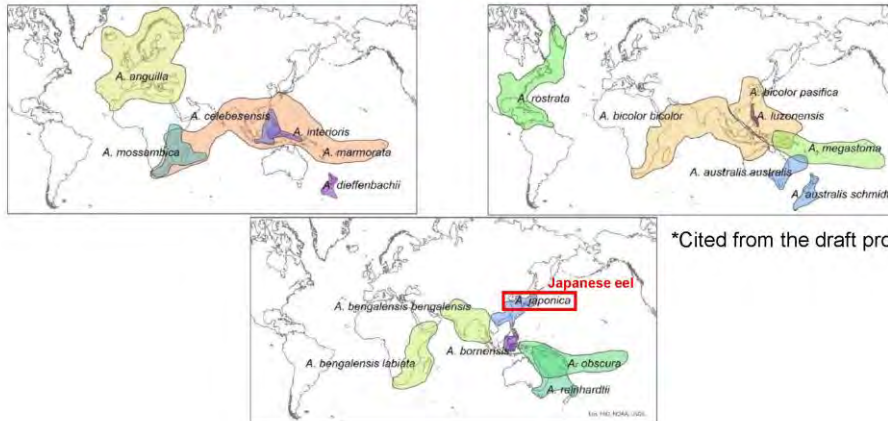
The Members generally saw merits of further discussion on possible establishment of an international/regional framework for eels.

Specific items raised to discuss;

- i. Species (possibly determines participants)**
- ii. Scope of possible framework**

1. Distribution of *Anguilla* spp.

- 19 species in genus *Anguilla* (Frick et al., 2024).



*Cited from the draft proposal of EU

3

1. Possible participants by target species

Species	Possible members
Japanese eel (<i>A. japonica</i>)	Members in East Asia
Japanese eel + Tropical eels (e.g. <i>A. bicolor</i> , <i>A. Marmorata</i>)	Members in East Asia + ASEAN members
American eel (<i>A. rostrata</i>)	Members in East Asia (?) + North America and Caribbean members (P)
European eel (<i>A. anguilla</i>)	Members in East Asia (?) + Europe and North Africa members (P)

4

2. Scope of possible international / regional framework

	Forum	Examples	Establishment of an Organization.	Legally Binding Measures	Obligatory Contribution
Regional Fishery Bodies (RFBs)	Regional Fisheries Management Organizations (RFMOs)	NPFC, WCPFC, NPAFC, etc.	✓	✓	✓
	Regional Fisheries Management Arrangement (RFMAs)	CCBSP, etc.		✓	
	Regional Fisheries Advisory Bodies (RFABs)	ICES, WECAFC, APFIC, SEAFDEC, etc.	✓		
Informal Consultation on International Cooperation for Conservation and Management of the Japanese Eel Stock and Other Relevant Eel Species					

5

2. Scope of possible international / regional framework

	Forum	Examples	Establishment of an Organization.	Legally Binding Measures	Obligatory Contribution
Regional Fishery Bodies (RFBs)	Regional Fisheries Management Organizations (RFMOs)	NPFC, WCPFC, NPAFC, etc.	✓	✓	✓
	Regional Fisheries Management Arrangement (RFMAs)	CCBSP, etc.			
	Regional Fisheries Advisory Bodies (RFABs)	ICES, WECAFC, APFIC, SEAFDEC, etc.			
Informal Consultation on International Cooperation for Conservation and Management of the Japanese Eel Stock and Other Relevant Eel Species					

International Council for the Exploration of the Sea (ICES)

● European eel

Advice since 1999

Link [European eel \(*Anquilla anguilla*\) throughout its natural range](#)

● American eel

Discussion in the Working Group on American Eels (WGAMEEL)

6

附件 33 未來工作計畫

IC18 Doc.18

(Draft)

Work Plan for the Informal Consultation in the 2025-2026 season

By a month prior to the 19th meeting of the Informal Consultation

- Submission of data on catch and input of glass eels in 2024-2025 input season
- Submission of data and information in accordance with the Standard Working Formats for Eel Statistics (provisional)
- Submission of revised summary table of conservation and management measures for eels

May-June 2026 (TBD)

The 5th Scientific Meeting

May-June 2025 (TBD)

The 19th meeting of the Informal Consultation

【Reference: related international events】

1. Deadline of submission of CITES Appendix listing proposal(s): June 27, 2025
(Possible publication of the Joint Statement by Members of the Informal Consultation)
2. Publication of Report of the FAO Experts Advisory Panel to CITES: August-September
(Possible revision of the Joint Statement reflecting the advice from the FAO Panel)
3. The 20th meeting of the CITES Conference of the Parties (CoP 20) in Samarkand, Uzbekistan on November 24 - December 5, 2025, to consider:
 - proposals of the amendment to CITES Appendices
 - decisions for the Parties, Secretariat and Standing Committee/Animals and Plants Committees
 - recommended or proposed / revised resolution
 - Other matters

附件 34 聯合新聞稿

Joint Press Release

June 20th, 2025

On the occasion of the Eighteenth Meeting of the Informal Consultation on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species (Informal Consultation),

Fisheries Management and Scientific Research Departments of the People's Republic of China, the Fisheries Agency of Japan, the Ministry of Oceans and Fisheries of the Republic of Korea and the Fisheries Agency of Chinese Taipei (hereinafter referred to as "Participants"),

Recalling that People's Republic of China, Japan, the Republic of Korea and Chinese Taipei are all Asia-Pacific Economic Cooperation (APEC) Economies;

Recognizing that the 2014 Joint Statement issued at the Seventh Meeting serves as a stepping stone towards further cooperation in the East Asian region,

Recalling every effort towards sustainable use of eel species after 2014 including the limit on eel seeds input into aquaculture ponds and proposal on the establishment of the Alliance for Sustainable Eel Aquaculture (ASEA),

Noting the decisions 19.218 to 19.221 of the 19th Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES COP19),

Noting also the eel relevant documents (AC33 Summary record and SC78 Summary record) adopted at the 33rd Meeting of CITES Animals Committee (AC33) and the 78th Meeting of CITES Standing Committee (SC78) respectively,

Sharing information on the ongoing consideration of proposal to include all *Anguilla* species in CITES Appendix II by European Commission and EU member States, which might risk undermining conservation and management of Japanese eel stock and other relevant eel species by the Participants,

Sharing the view on importance of cooperating towards the 20th Meetings of the Conference of the Parties to CITES (COP20),

Mindful that Participants are willing to cooperate under the Framework of APEC Ocean and Fishery Working Group (OFWG);

Have reaffirmed the following common views:

- (1) Participants have cooperated on the conservation and management measures of Japanese eel stock and other relevant eel species as follows:
- reviewed input, output and trade statistics of glass eels during the season 2024-2025;
 - shared information on international and domestic circumstances related to eel species;
 - reviewed and endorsed the Summary Report of the 4th Scientific Meeting on Japanese Eel and Other Relevant Eels (16th-17th June, 2025; hereafter referred to as “the 4th Scientific Meeting”), including the Draft Workplan for Scientific Activities and collaborative Research on Japanese eel as well as the guidelines for the morphological identification of glass eels endemic to Asia and Oceania; and endorsed the Terms of Reference for Scientific Meeting on Japanese Eel and Other Relevant Eels; and endorsed the revised Terms of Reference for Task Team 1 & 2 of Scientific Activities and Collaborative Research on Japanese Eel Established under the Scientific Meeting.
 - shared information on the domestic conservation and management measures that each Participant has taken since 2014 joint statement as follows;

China:

China calls on all localities to further strengthen the export management of glass eel, strengthen law enforcement and supervision, strengthen industry self-discipline, severely crack down on the smuggling of glass eel, and optimize the process and management system of international trade of glass eel. The Yangtze River Estuary and the Yangtze River Basin are the most important producing areas of glass eel in China. In order to conserve the glass eel and other fisheries resources in the Yangtze River, from January 1, 2021, the issuance of special fishing licenses for glass eel in the waters within the fishing ban management area of Yangtze River has been ceased. Moreover, China has established a special non-fishing zone in the Yangtze River Estuary, in order to ensure the successful migration of glass eels to the Yangtze River. In addition, China's coastal waters enter into summer fishing moratorium from May 1st, with almost all of the coastal fisheries closed for about 4 months. Besides, China has carried out the stock enhancement and release of Japanese eel. The above measures will help restore the number of parent eel populations and wild glass eel resources, and promote the sustainable development of eel industry.

Japan:

Catch of glass eels is subject to licenses to be issued by the prefectural governments and duration of fishing season is limited. Catch of adult eels using certain fishing gears is subject to licenses to be issued by the prefectural governments. Variety of additional measures, such as gear restriction, upper limit of harvest for individual and time closure, have been introduced and implemented for catch of both glass and adult eels considering unique situation in each Prefecture. In June 2015, the licensing

system was introduced to eel aquaculture, under the Inland Water Fishery Promotion Act. The amount of initial input of eel seeds is restricted by eel species and allocated for each individual farmer under this Act. The penalty for aquaculture operation without licenses or exceeding individual input quota of eel seeds is imprisonment of up to 3 years or fine up to 2 million yen. In April 2020, the total input of eel seeds in Japan getting close to the upper limit, the Fisheries Agency of Japan directed prefectural governments to halt the catch of glass eels. Since 2006, continuous efforts have been made for the purpose of the creation and conservation of a favorable riverine environment, based on the concept of “Nature-oriented river works” representing conservation and regeneration of the environment as habitat, growing and spawning grounds that rivers intrinsically have, which has become a basic idea for management of river.

The number of prefectures which prohibit the catch of silver eel is increasing, bearing in mind the resolution taken by National Federation of Inland Waters Fishing Ground Management Commissions and National Federation of Inland water Fisheries Cooperatives in 2018 take measures for conservation of silver eels in all prefectures as soon as possible. In 2019, the Fisheries Agency of Japan launched a project in order to improve a traceability of Japanese eel from a catch of glass eel through to an input into aquaculture pond as well as a research project including resource trend analysis and spawning migration tracking with the goal of future development of a Japanese eel stock assessment. In accordance with the amendment of the Fishery Act in December 2020, the government of Japan considerably strengthened the penal provisions in order to prevent poaching by giving great disadvantage to offenders. After December 2023, the penalty for catching glass eels without a fishing permit is an imprisonment of up to 3 years or a fine of not more than 30 million Japanese yen. In December 2020, Act on Ensuring the Proper Domestic Distribution and Importation of Specified Aquatic Animals and Plants was enacted to prevent the distribution of illegally harvested, unregulated and unreported aquatic animals and plants by requiring the communication of handling information among distributors and traders, the preparation and preservation of transaction records, and the attachment of documents attesting that the product was harvested legally when it is imported or exported. The distribution of glass eel will also be subject to the obligations under this law from December 2025. Japan implements the Regulations on Export Approvals for Glass Eels to promote the sustainable use of eel species under international cooperation. In accordance with the Regulations, before an export approval, the Fisheries Agency of Japan confirms appropriateness of the export of glass eels for conservation and management of eel species, including all international agreements and arrangements that Japan has participated in are fully complied.

Republic of Korea:

The Republic of Korea has actively enforced a comprehensive range of resource management and illegal fishing control measures in the eel fisheries sector. In May 2025, a dedicated Eel Fisheries Resource Management Consultative Body was established, marking a significant step forward in governance. This body, composed of 15 members—including government officials, local authorities,

researchers, experts, and industry stakeholders—oversees the sustainable management of eel resources. To further enhance transparency and regulatory compliance, Korea launched a pilot program for glass eel catch reporting in July 2024. Additionally, the mandatory auction system for adult eels, implemented in July 2018, has played a pivotal role in curbing illegal distribution within the industry. As a result, trade transparency has increased in the eel production.

In terms of stock management, strict compliance with glass eel stocking limitations is maintained. An approval system regulates the translocation of imported eels, with criteria tailored to different aquaculture systems. To further safeguard local stocks, all import and export of eel seedlings have been temporarily suspended as of March and April 2025.

Korea is also committed to preserving spawner eels through robust measures. Since 2017, the country has enforced a closed fishing season—from October 1st to March 31st of the following year—and has implemented strict size- restrictions, prohibiting the capture of eels between 15 cm and 45 cm year-round. In August 2020, the regulatory framework for eel aquaculture transitioned from a registration-based system to a licensing model. This change aims to prevent the indiscriminate proliferation of eel farms. Moreover, Korea has intensified its monitoring and enforcement against the illegal fisheries.

To restore eel resources, Korea manages eel ladders dedicated to glass eels, ensuring safe passage and supporting population recovery. In addition, the government actively promotes resource recovery through glass eel release projects. In 2025, a total of 749,000 individuals are scheduled for release as a collaborative effort between public and private sectors.

Chinese Taipei:

With regard to the glass eel fishing, although the traditional fishing season for glass eel is from October to April, glass eel fishing is only permitted from November to February in accordance with the 2013 Regulations on the Restricted Fishing Seasons for Elvers, subject to adjustment based on annual migrant pattern and/or for scientific purposes. A license system has also been introduced to vessels fishing for glass eel. In order to enhance the management of Japanese eels captured domestically and regionally, a traceability system will be assessed, and introduced in due course.

With a view to protecting the habitats of eels, the catch of young and adult eels is managed by local governments, and the fishing for eels has been prohibited in 41 rivers. For example, Yilan County, the traditional major glass eel harvest region, has prohibited the catch of young and adult eels in all its rivers so as to conserve eel species.

As for the export control, based on the Foreign Trade Act and the regulations established pursuant to this Act, export of glass eels is prohibited from November to March.

With regard to the control of eel farming activities, the Regulations for Input Management of Eel Aquaculture has been promulgated since November 2014 and amended as appropriate to enhance the control of eel farming activities. As per these Regulations, the Fisheries Agency will review the relevant requirements and announce the input amount of glass eels annually, and each eel farmer is subject to the control and management of license system and individual input limit. For Japanese eel

and other relevant eel species, the total upper limit for glass eel input are both set at 10 metric tons per year.

For stock enhancement, the release of Japanese eel larvae was from the confiscated glass eels to rivers, and the part of those eels was also used for scientific research.

(2) Participants renewed their commitments to make the utmost efforts as follows;

- to further strengthen conservation and management measures of Japanese eel stock and other relevant eel species and closely work together in this regard;
- to promote and collaborate on scientific research on Japanese eel in line with Terms of References for Scientific Meeting as well as in line with revised Terms of References for Task Team 1 & 2 of Scientific Activities and Collaborative Research on Japanese Eel Established under the Scientific Meeting;
- to hold the 5th Scientific Meeting in 2026 spring season, in order to share scientific knowledge and experience, as well as to provide scientific advice for conservation and management measures of the species;
- to adopt either of the following measure(s), but not limited to one measure if situation allows: to enhance conservation on key habitat of Japanese eel and/or to decrease the capture and utilization of wild Japanese eel;
- to restrict initial input of glass eels and eel fries of Japanese eel taken from the wild into aquaculture ponds in 2025-2026 input season up to 80% of that of the 2013-2014 input season;
- to take every possible measure not to increase the amount of initial input of seeds of eel species other than Japanese eels from the level stated in the 2014 Joint Statement;
- to discuss further on the corrective actions in the case where the glass eels input exceeds the agreed individual upper limits in the next Informal Consultation. While a Member reported that it would release the excess juveniles into nature, there was a general consensus that corrective actions policy should be developed in the next Informal Consultation, taking into account good practices in each Participant such as individual input quota for each farmer and punishment in case of the violation;
- to consider complementary measures intersessionally for the discussion and the adoption at the next Informal Consultation, possibly taking into account scientific advice from the Scientific Meeting;
- to make continued efforts individually and/or jointly to improve traceability and transparency in domestic and international eel trade, taking into consideration of the outcomes of the CITES-COP 19, AC32, AC33, SC77 and SC78;
- to closely cooperate with other international instruments;
- to consider possible establishment of a legally binding framework, such as regional or subregional fisheries management organization or arrangement;
- to further cooperate towards CITES-COP20; and
- to encourage voluntary actions to be taken by the private sector in line with the above-mentioned measures.

Attachment:

- Eel Statistics on catch and input of glass eels and trade of any stages of eels compiled from the Standard Working Formats for statistics of glass eel, eel fry and adult eel on each stage, and
- Summary table of conservation and management measures for eels.

【Revised Standard Working Formats for Eel Statistics (2025)】

Members: China

Format 1: Data on Catch of Japanese Eel (Data is limited to taken from the wild)

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023	2023-2024	2024-2025
Catch of glass eel	kg	28000.0	19500.0	55000.0	20500.0	21000.0	26500.0	16000.0	14500.0	50000.0	38000.0	29500.0	40450.0	13,095.0	-	-
Catch of eel fry (kuroko)	kg															
Catch of wild adult eel	kg or tons															

[Notes]:

1. The catch data of Japanese eel are entered by glass eel, eel fry and wild adult eel, respectively.
2. Unit for catch of glass eel and eel fry should be weight in kilograms. Unit for adult eel should be weight in metric tons.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (catch of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

○Comments by Members:

*According to China Fishery Statistical Yearbook, catch data is only available up to 2023, totaling 13,095 kg. China currently has no statistical data for this year's catch.

Format 2: Data on Fishing effort on Japanese eel

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Fishing effort on glass eel	number of licenses (g) (licensees), fishing vessels											-		
Fishing effort on eel fry (kuroko)	number of licenses (g) (licensees), fishing vessels											-	-	
Fishing effort on wild adult eel	number of licenses (g) (licensees), fishing vessels											-	-	

[Notes]:

1. The data of fishing effort on Japanese eel are entered by glass eel, eel fry and adult eel, respectively.
2. Examples of unit for fishing effort may include the number of licenses, the number of fishermen or the number of fishing vessels. The unit can be chosen in accordance with each domestic legislations.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (fishing effort on glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

○Comments by Members:

Format 3: Input of eel seeds (glass eels and eel fry (kuroko)) into aquaculture ponds

Species	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
japonica	kg	8000.0	7000.0	45000.0	9300.0	8200.0	18500.0	3500.0	3000.0	36000.0	33000.0	18000.0	20000.0	9,000.0	-
domestic catch	kg				9300.0	8200.0	18500.0	3500.0	3000.0	36000.0	33000.0	18000.0	20000.0	9,000.0	
imports	kg											-	-	-	
Other eel species	kg	14500.0	20000.0	32000.0	35500.0	39500.0	36000.0	33000.0	33500.0	35000.0	29000.0	28,000.0	34000.0	30,000.0	-
bicolor	kg	5,500.0	7,000.0	13,500.0	3,500.0	8,000.0	3,000.0	0.0	0.0	0.0	0.0	0.0	3000.0	0.0	0.0
anguilla	kg	0.0	0.0	0.0	0.0	4,500.0	5,000.0	4,000.0	2,500.0	2,000.0	0.0	0.0	0.0	0.0	0.0
rostrata	kg	9,000.0	13,000.0	18,500.0	32,000.0	27,000.0	28,000.0	29,000.0	31,000.0	33,000.0	29,000.0	28,000.0	31000.0	30,000.0	-
marmorata	kg											-	-	-	-
mossambica	kg											-	-	-	-
Total	kg	22500.0	27000.0	77000.0	44800.0	47700.0	52500.0	36500.0	36500.0	71000.0	62000.0	46000.0	54000.0	39,000.0	-

[Notes] :

- Inputs of eel seeds (glass eels and eel fry) into aquaculture ponds are entered by japonica and other eel species, respectively
- The data of japonica are entered by domestical caught seeds and imported seeds, respectively
- However, eel seeds which transferred by other countries and regions are not included in the data of input of eel seeds.
- Unit for catch of glass eel and eel fry should be weight in kilograms.
- When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- The statistic period of the data related to eel seeds (input of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).

□Comments by Members:

* About Japanese eel: China has not yet obtained data on the input of eel seeds for 2024-2025 season.

- About other eel species: China has not yet obtained data on the input of American eel seeds (Anguilla rostrata) for the current season (2024-2025).

Format 4: Aquaculture production

Species	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023	2024
japonica	kg or tons	8,000.0	12,000.0	11,000.0	14,000.0	16,000.0	16,000.0	18,000.0	14,000.0	14,000.0	28,000.0	-	-	-	-
Other eel species	kg or tons	32000.0	30000.0	35000.0	42000.0	50000.0	52000.0	57000.0	65000.0	68000.0	64000.0	-	-	-	-
bicolor	kg or tons	1,000.0	2,000.0	2,000.0	3,000.0	1,000.0	1,000.0					-	-	-	-
anguilla	kg or tons	22,000.0	15,000.0	16,000.0	15,000.0	13,000.0	12,000.0	12,000.0	8,000.0	5,000.0	3,000.0	-	-	-	-
rostrata	kg or tons	9,000.0	13,000.0	17,000.0	24,000.0	36,000.0	39,000.0	45,000.0	57,000.0	63,000.0	61,000.0	-	-	-	-
marmorata	kg or tons											-	-	-	-
mossambica	kg or tons											-	-	-	-
Total	kg or tons	40000.0	42000.0	46000.0	58000.0	66000.0	68000.0	75000.0	79000.0	82000.0	92000.0	120000.0	145800.0	291,566.0	-

[Notes]:

1. The data of aquaculture production are entered by japonica and other eel species, respectively
2. Unit for aquaculture production should be weight (kilograms or metric tons) as far as possible.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Aquaculture production data should be the calendar year.

○Comments by Members:

1. China Fishery Statistical Yearbook on aquaculture production are only available up to 2023, totaling 291,566 tons; data for 2024 is not currently available.
2. Detailed aquaculture production figures disaggregated by eel species are difficult to obtain, only overall production data is available.

Format 5: Other data on aquaculture

Item	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023-24	2024-25
Scale of aquaculture industry	number of aquaculture operators	465	558	687	696	772	797	830	868	918	926	1004	1100	1280	-

[Notes]:

- ① Unit for scale of aquaculture industry may include the number of aquaculture operator or the dimensions of aquaculture ponds.
- ② When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.

○Comments by Members:

1. Due to inconsistent statistical standards among eel farms, this information is unavailable.

Format 6: Import of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2024	2024-25
japonica	glass eel	kg											-	-		
	eel fry (kuroko)	kg											-	-		
Total		kg											-	-		
Other eel species	glass eel	kg	14,500.0	20,000.0	32,000.0	35,500.0	39,500.0	36,000.0	33,000.0	33,500.0	35,000.0	29,000.0	28,000.0	34000		
	eel fry (kuroko)	kg											-	-		
Total		kg	14,500.0	20,000.0	32,000.0	35,500.0	39,500.0	36,000.0	33,000.0	33,500.0	35,000.0	29,000.0	28000.0	34,000.0	34,400.0	-

{Notes}:

1. The data of import of eel seeds (glass eels and eel fry) are entered by japonica and other eel species, respectively.
2. The statistic period of the data related to eel seeds (import of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members:

1. Information does not differentiate between eel species.
2. Chinese customs statistics are typically compiled on an annual cycle; thus, import data for the 2024–2025 season is unavailable, with only the 2024 data accessible.

Format 7: Import of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023-24	2024-25
japonica	live eel	kg or tons														
	broiled eel	kg or tons														
Other eel species		kg or tons														
		kg or tons														
Total		kg or tons														

{Notes}:

- ① The data of import of eel and eel products are entered by japonica and other eel species, respectively.
- ② Examples of type/size of import of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
- ③ When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- ④ Unit for import of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members:

Format 8: Export of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
japonica	glass eel	kg	19000.0	14000.0	9500.0	10000.0	11200.0	12800.0	10000.0	11500.0	8000.0	5000.0	12000.0	13300	15,000.0	-
	eel fry (kuroko)	kg											-	-	-	-
Total		kg	19000.0	14000.0	9500.0	10000.0	11200.0	12800.0	10000.0	11500.0	8000.0	5000.0	12000.0	13,300.0	15,000.0	-
Other eel species	glass eel	kg														-
	eel fry (kuroko)	kg														-
Total		kg														1,150.00

[Notes] :

1. The data of export of eel seeds are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (export of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members:

1. Information does not differentiate between eel species.

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Format 9: Export of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024-25
japonica	live eel	kg or tons														
	broiled eel	kg or tons														
Other eel species		kg or tons														
		kg or tons														
Total		tons	36,398.0	33,917.0	35,001.0	40,295.0	41,426.0	42,357.0	/	46,732.0	52,432.0	69,917.0	64,200.0	66,660.0	-	
japonica/Other eel species	live eel	tons	3,846.0	5,295.0	5,818.0	5,562.0	6,219.0	8,781.0	/	7,508.0	9,630.0	10,107.0	14,100.0	17,159.0	15,009.9	
(Data on Japanese eel and other eels are	broiled eel	tons	32,552.0	28,622.0	29,183.0	34,733.0	35,207.0	35,576.0	/	39,224.0	42,802.0	59,810.0	50,100.0	49,501.0	-	

[Notes] :

1. The data of export of adult eel and eel products are entered by japonica and other eel species, respectively
2. Examples of type/size of export of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for export of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members:

1. Processed products including broiled eel (whole or in pieces), with broiled eel unspecified. Prepared or preserved eel is 52,360 tons.

Format 10. Mean value of weight and length of Japanese eel

	Unit	When catching	When inputting into aquaculture ponds	When importing	When exporting
glass eel	weight (g)				
	body length (cm)				
eel fry	weight (g)				
	body length (cm)				
adult eel	weight (g)				
	body length (cm)				

[Notes]:

1. The data of weight and length of Japanese eel into aquaculture ponds are entered by glass eel, eel fry and adult eel, respectively.
2. The data entered can be either mean value or figures in certain ranges (e.g., XX – YYg or cm). If mean value is available, it should be clearly mentioned in the comments by Members that the mean value of weight and length figures are based on biological or administrative standards or figures obtained from industry associations, etc.
3. When there are no relevant data or data is not available, “-” should be entered. When data is identified as zero, “0” should be entered.
4. “Body length” is the length of a fish measured from the tip of the snout to the posterior end of the last vertebra.

□Comments by Members:

●Data Sources and/or Methods to collect or estimate the data

(* Please fill in data sources and/or methods to collect or estimate the data entered in from format 1 to format 14 respectively.)

1. Catch of glass eel	The data is estimated in every fishing period (from October to May of next year) by adding the amount of export of glass eels to the amount of input of glass eels into aquaculture ponds by some local eel farming association. The data from 2023 is sourced from the China Fishery Statistical Yearbook.
2. Catch of eel fry (kuroko)	-
3. Catch of wild adult eel	There is no catch of adult eel in China.
4. Fishing effort on glass eel	
5. Fishing effort on eel fry (kuroko)	-
6. Fishing effort on wild adult eel	There is no catch of adult eel in China.
7. Input of eel seeds into aquaculture ponds	The data is based on the information from local eel farming association of the major eel production provinces.

8. Aquaculture production	The data is based on the information from local eel farming association of the major eel production provinces. The data from 2023 is sourced from the China Fishery Statistical Yearbook.
9. Scale of aquaculture industry	The data is collected and estimated on the information from local eel farming association of the major eel production provinces.
10. Import of eel seeds	The data is based on the information from customs, fishery statistics and relevant industry associations.
11. Import of eel and eel products	The data is based on the information from customs, fishery statistics and relevant industry associations.
12. Export of eel seeds	The data is based on the information from customs, fishery statistics and relevant industry associations.
13. Export of eel and eel products	The data is based on the information from customs, fishery statistics and relevant industry associations.
14. Mean value of wight and length of Japanese eel	

【Revised Standard Working Formats for Eel Statistics (2025)】

Members: Japan

Format 1: Data on Catch of Japanese Eel (Data is limited to taken from the wild)

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Catch of glass eel	tons(~/2014-15), kg(2015-16~/)	9.0	5.2	17.4	15.3	13625.2	15442.4	8967.5	3670.1	17112.4	11333.9	10344.7	5660.2	7110.2	13400.7(*1)
Catch of eel fry (kuroko)(*2)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Catch of wild adult eel (*3)	tons	165	135	112	70	71	71	69	66	66	63	59	55	-	-

[Notes] :

1. The catch data of Japanese eel are entered by glass eel, eel fry and wild adult eel, respectively.
2. Unit for catch of glass eel and eel fry should be weight in kilograms. Unit for adult eel should be weight in metric tons.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (catch of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

○Comments by Members:

*1 The 2024-2025 season data of catch of glass eel is from 1st November to 31st March temporarily.

*2 There are no relevant data of "Catch of eel fry (kuroko)".

*3 The latest data available for "Catch of wild adult eel" is 2022-2023 season.

Format 2: Data on Fishing effort on Japanese eel

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Fishing effort on glass eel (*4)	number of licenses (or fishermen, fishing vessels)	6,669	6,781	6,617	4,698	4,398	4,790	5,874	5,898	5,762	5,723	4,467	4,382	7,321	-
Fishing effort on eel fry (kuroko)(*5)	number of licenses (or fishermen, fishing vessels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fishing effort on wild adult eel(*6)	number of licenses (or fishermen, fishing vessels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[Notes] :

1. The data of fishing effort on Japanese eel are entered by glass eel, eel fry and adult eel, respectively.
2. Examples of unit for fishing effort may include the number of licenses, the number of fishermen or the number of fishing vessels. The unit can be chosen in accordance with each domestic legislations.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (fishing effort on glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

○Comments by Members:

*4 The latest data available for "Fishing effort on glass eel" is 2023-2024 season.

*5 There are no relevant data of "Fishing effort on eel fry (kuroko)".

*6 There are no relevant data of "Fishing effort on wild adult eel".

Format 3: Input of eel seeds (glass eels and eel fry (kuroko)) into aquaculture ponds

Species	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(*8)
japonica	kg	15.9	12.8	27.1	18.3	19718.2	19590.4	14179.5	15175.1	20131.4	18285.9	16187.7	16204.2	16172.2	16798.7
domestic catch	kg	8.0	5.2	17.4	15.3	13625.2	15442.4	8967.5	3670.1	17112.4	11333.9	10344.7	5660.2	7110.2	13400.7
imports	kg	6.9	7.4	9.7	3.0	6091	4148	5211	11505	3019	6952	5843	10544	9062	3398
Other eel species(*7)	kg												55.5	45.8	41.3
bicolor	kg												55.5	45.8	41.3
anguilla	kg	0.43	1.50	3.50	0.05	175.4	94.8	34.9	51.6	58.5	59.9	74.6	0.0	0.0	0.0
rostrata	kg												0.0	0.0	0.0
marmorata	kg												0.0	0.0	0.0
mossambica	kg												0.0	0.0	0.0
Total	kg	16.3	13.9	30.6	18.3	19891.6	19685.2	14213.4	15226.7	20188.9	18345.8	16262.3	16259.7	16218.0	16838.4

[Notes]

- Inputs of eel seeds (glass eels and eel fry) into aquaculture ponds are entered by japonica and other eel species, respectively.
- The data of japonica are entered by domestical caught seeds and imported seeds, respectively.
- However, eel seeds which transferred by other countries and regions are not included in the data of input of eel seeds.
- Unit for catch of glass eel and eel fry should be weight in kilograms.
- When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- The statistic period of the data related to eel seeds (input of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).

Comments by Members:

*7 The species-specific data of "Other eel species" has been available since 2022-2023 season.

*8 The 2024-2025 season data of catch of glass eel is from 1st November to 31st March temporarily.

Format 4: Aquaculture production(*9,10)

Species	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
japonica	kg or tons	17,377	14,204	17,627	20,119	18,907	20,979	15,111	17,071	16,806	20,673	19,167	18,341	-	-
Other eel species	kg or tons														
bicolor	kg or tons														
anguilla	kg or tons														
rostrata	kg or tons														
marmorata	kg or tons														
mossambica	kg or tons														
Total	kg or tons	17,377	14,204	17,627	20,119	18,907	20,979	15,111	17,071	16,806	20,673	19,167	18,341	-	-

[Notes]:

1. The data of aquaculture production are entered by japonica and other eel species, respectively.
2. Unit for aquaculture production should be weight (kilograms or metric tons) as far as possible.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Aquaculture production data should be the calendar year.

○Comments by Members:

*9 Total data of aquaculture production is entered, as it is not possible to provide species-specific data.

*10 The latest data available for "Aquaculture production" is 2023 temporarily.

Format 5: Other data on aquaculture

Item	Unit	2012(*11)	2013	2014(*11)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Scale of aquaculture industry	number of aquaculture operators	-	384	-	439	441	463	460	456	442	436	433	431	425	415

[Notes]:

①Unit for scale of aquaculture industry may include the number of aquaculture operator or the dimensions of aquaculture ponds.

②When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.

○Comments by Members:

*11 The data source for 2013 is "Census of Fisheries" published by the Ministry of Agriculture, Forestry and Fisheries every five years. The data from 2015 to 2025 are the total number of japonica-farming operators who are granted licenses issued by the Ministry of Agriculture, Forestry and Fisheries under the licensing system in accordance with the Inland Water Fishery Promotion Act, which entered into force in June 2015. There are no relevant data of 2012 and 2014.

Format 6: Import of eel seeds (glass eels and eel fry)(^{*12})

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(^{*13})
japonica	glass eel	tons(~2014-15), kg(2015-16~)	9.2	10.7	12.5	3.8	7,585	4,827	5,303	12,563	3,999	10,177	8,193	13,517	11,814	5,397
	eel fry (kuroko)															
Other eel species	glass eel	tons(~2014-15), kg(2015-16~)	9.2	10.7	12.5	3.8	7,585	4,827	5,303	12,563	3,999	10,177	8,193	13,517	11,814	5,397
	eel fry (kuroko)															
Total		tons(~2014-15), kg(2015-16~)	9.2	10.7	12.5	3.8	7,585	4,827	5,303	12,563	3,999	10,177	8,193	13,517	11,814	5,397

[Notes]

1. The data of import of eel seeds (glass eels and eel fry) are entered by japonica and other eel species, respectively.
2. The statistic period of the data related to eel seeds (import of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.)
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

○Comments by Members:

^{*12} It is not possible to provide type/size-specific and species-specific data. Therefore, a new row "Grand Total" was inserted for the total data of import of eel seeds (glass eels and eel fries) for all the species.

^{*13} The 2024-2025 season data of import of eel seeds (glass eels and eel fries) is from 1st November to 31st March temporarily.

Format 7: Import of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025(^{*15})
japonica	live eel	kg or tons														
	broiled eel	kg or tons														
Other eel species		kg or tons														
		kg or tons														
Total		kg or tons	19,660.9	18,257.7	20,213.7	31,156.1	31,469.3	32,293.6	33,236.3	31,409.8	34,342.8	42,366.8	36,580.7	33,930.7	44,730.2	9196.0
japonica/Other eel species (^{*14})	live eel	tons	4,677.6	4,789.2	4,781.1	7,066.7	7,276.1	6,815.7	8,812.7	6,733.2	5,441.1	7,034.5	8,267.4	7,402.8	8062.5	1519.1
	broiled eel	tons	14,983.3	13,468.5	15,432.7	24,089.4	24,193.2	25,477.8	24,423.6	24,676.6	28,901.7	35,332.3	30,313.2	26,527.8	36667.7	7676.9

[Notes]

- ①The data of import of eel and eel products are entered by japonica and other eel species, respectively.
 - ②Examples of type/size of import of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
 - ③When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
 - ④Unit for import of eel and eel products should be weight (kilograms or metric tons) as far as possible.
- Comments by Members:
- ^{*14} It is not possible to provide species-specific data. Therefore, a new row "japonica/Other eel species" was inserted for the data of import of all the species in live and broiled types separately.
- ^{*15} The 2025 data of import of eel and eel products is from 1st January to 31st March temporarily.

Format 8: Export of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
japonica	glass eel(*16)	tons(~2020-21), kg(2021-22)	-	-	-	-	-	-	-	-	-	0.1359	19.96	0	0	-
	eel fry (kuroko)(*17)	tons(~2020-21), kg(2021-22)	5.713	1.622	6.7	1.3	0.4	0.9	2.6	10.1	23.6	9.076	4818.78	5044.6	9900.6	-
Total		tons(~2020-21), kg(2021-22)	5.7	1.6	6.7	1.3	0.4	0.9	2.6	10.1	23.6	9.2	4,838.7	5,044.6	9900.6	-
Other eel species	glass eel	kg	-	-	-	-	-	-	-	-	-	0	0	0	0	-
	eel fry (kuroko)	kg	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	-
Total		kg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	-

[Notes] :

1. The data of export of eel seeds are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (export of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st December, 20XX to 31st November, 20XX+1.)
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

○ Comments by Members:

*16 The "glass eel" is the eels in 13g or less that have never been farmed in domestic aquaculture ponds. It is not possible to provide the data up to 2019-20, as the export of such "glass eel" was prohibited. The latest data available for glass eel is 2023-2024 season.

*17 The "eel fry (kuroko)" is the eels in 13g or less that have been farmed in domestic aquaculture ponds. The latest data available for eel fry (kuroko) is 2023-2024 season.

Format 9: Export of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2023-24	2024-25(*19)
japonica	live eel	kg or tons														
	broiled eel	kg or tons														
Other eel species		kg or tons														
		kg or tons														
Total		kg or tons	31.6	32.1	69.6	59.6	71.0	112.2	66.5	80.4	135.2	65.9	61.2	41.0	69.5	21.2
japonica/Other eel species (*18)	live eel	tons	10.4	2.2	38.8	20.7	25.8	45.6	7.4	17.8	44.8	17.0	9.3	9.5	18.2	11.4
	broiled eel	tons	21.2	30.0	30.9	38.9	45.2	66.6	59.1	62.6	90.4	68.9	71.9	32.5	51.3	9.8

[Notes] :

1. The data of export of adult eel and eel products are entered by japonica and other eel species, respectively
2. Examples of type/size of export of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for export of eel and eel products should be weight (kilograms or metric tons) as far as possible.

○Comments by Members:

*18 It is not possible to provide species-specific data. Therefore, a new row "japonica/Other eel species" was inserted for the data of export of all the species in live and boiled types separately.

*19 The 2025 data of export of eel and eel products is from 1st January to 31st March temporarily.

Format 10. Mean value of weight and length of Japanese eel

	Unit	When catching(*20)	When inputting into aquaculture ponds(*21)	When importing(*22)	When exporting(*23)
glass eel	weight (g)	0.2g	-	-	~13g
	body length (cm)	6cm	-	-	-
eel fry	weight (g)	0.2g~13g	-	-	~13g
	body length (cm)	6cm~20cm	-	-	-
adult eel	weight (g)	300g~	-	-	-
	body length (cm)	50cm~	-	-	-

[Notes] :

1. The data of weight and length of Japanese eel into aquaculture ponds are entered by glass eel, eel fry and adult eel, respectively.

2. The data entered can be either mean value or figures in certain ranges (e.g., XX~YYg or cm). If mean value is available, it should be clearly mentioned in the comments by Members that the mean value of weight and length figures are based on biological or administrative standards or figures obtained from industry associations, etc.

3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.

4. "Body length" is the length of a fish measured from the tip of the snout to the posteriormost of the last vertebra.

○Comments by Members:

*20 The data of each "when catching" is estimated based on actual measurement values of weight and total length at each life stage of Japanese eel.

*21 There are no relevant data of "When inputting into aquaculture ponds".

*22 There are no relevant data of "When importing".

*23 There are no relevant data of total length because the glass eel and eel fry(kuroko) are administrated with "weight" in accordance with Export Trade Control Order when exporting.

●Data Sources and/or Methods to collect or estimate the data

(* Please fill in data sources and/or methods to collect or estimate the data entered in from format 1 to format 14 respectively.)

1. Catch of glass eel	The data is estimated in every fishing period (from November of previous year to May) by deducting the amount of import of glass eels (calculated from the Trade Statistics every fishing period) from the amount of input of glass eels into aquaculture ponds which reported by eel-farming operators.
2. Catch of eel fry (kuroko)	-
3. Catch of wild adult eel	The data is from "Annual Statistics on Fisheries and Aquaculture Production" compiled and published by the Ministry of Agriculture, Forestry and Fisheries. The data contained in this statistics are derived from questionnaires on catch and aquaculture production sent to fisheries cooperatives covering main rivers and lakes as well as aquaculture operators all around the country.
4. Fishing effort on glass eel	The index of fishing effort on glass eels is the total number of licenses submitted by each prefecture which has the mandate to issue licenses.
5. Fishing effort on eel fry (kuroko)	-

6. Fishing effort on wild adult eel	—
7. Input of eel seeds into aquaculture ponds	The data is from the amount of input of glass eels into aquaculture ponds which reported by eel-farming operators. The data of eel seeds domestically captured is estimated by deducting the amount of input of glass eels into aquaculture ponds which reported by eel-farming operators from the amount of import of glass eels (calculated from the Trade Statistics). The data of imported eel seeds is calculated from the Trade Statistics every fishing period.
8. Aquaculture production	The data is from "Annual Statistics on Fisheries and Aquaculture Production" compiled and published by the Ministry of Agriculture, Forestry and Fisheries.
9. Scale of aquaculture industry	The index of scale of aquaculture industry is the number of aquaculture operators. The data for 2013 is from "Census of Fisheries" published by the Ministry of Agriculture, Forestry and Fisheries every five years. The data from 2015 is the total number of eel-farming operators who are granted licenses issued by the Ministry of Agriculture, Forestry and Fisheries under the licensing system in accordance with the Inland Water Fishery Promotion Act, which entered into force in June 2015.
10. Import of eel seeds	The data is from "Trade Statistics" compiled and published by the Ministry of Finance. The statistic code is 03.01.92.100 (live fish - eels (Anguilla spp.) - fry for fish culture).
11. Import of eel and eel products	The data is from "Trade Statistics" compiled and published by the Ministry of Finance. The statistic codes are 03.01.92.000 (live fish- eels (Anguilla spp.)) and 1604.17.000 (prepared or preserved fish, caviar and caviar substitutes prepared from fish eggs - eels). The amount of broiled eel is calculated as body of fish, dividing the amount of products by 0.6.
12. Export of eel seeds	The data is from the custom records and the reports submitted by exporters on eel seeds actually exported.
13. Export of eel and eel products	The data is from "Trade Statistics" compiled and published by the Ministry of Finance. The statistic codes are 03.01.92.000 (live fish- eels (Anguilla spp.)) and 1604.17.000 (prepared or preserved fish, caviar and caviar substitutes prepared from fish eggs - eels). The amount of broiled eel is calculated as body of fish, dividing the amount of products by 0.6.
14. Mean value of weight and length of Japanese eel	The value of weight of glass eel and eel fry(kuroko) when exporting are from Export Trade Control Order. The data of weight and total length of glass eel, eel fry(kuroko) and adult eel are estimated based on actual measurement values of weight and total length.

【Revised Standard Working Formats for Eel Statistics (2025)】

Members: Korea

Format 1: Data on Catch of Japanese Eel (Data is limited to taken from the wild)

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2022-23	2024-25
Catch of glass eel	kg	1,530	1,002	5,489	4,725	1,830	2,717	973	649	4,500	3,228	2,512	2,165	1,330	7,050
Catch of eel fry (kuroko)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Catch of wild adult eel	tons	102	73	80	85	70	48	56	60	59	84	9	55	80	-

[Notes]:

1. The catch data of Japanese eel are entered by glass eel, eel fry and wild adult eel, respectively.
2. Unit for catch of glass eel and eel fry should be weight in kilograms. Unit for adult eel should be weight in metric tons.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (catch of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

Comments by Members:

Format 2: Data on Fishing effort on Japanese eel

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Fishing effort on glass eel	number of licenses (or fishermen) / fishing vessels	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fishing effort on eel fry (kuroko)	number of licenses (or fishermen) / fishing vessels	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fishing effort on wild adult eel	number of licenses (or fishermen) / fishing vessels	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[Notes]:

1. The data of fishing effort on Japanese eel are entered by glass eel, eel fry and adult eel, respectively.
2. Examples of unit for fishing effort may include the number of licenses, the number of fishermen or the number of fishing vessels. The unit can be chosen in accordance with each domestic legislations.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (fishing effort on glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

Comments by Members: As number of licences is not managed by species in Korea, relevant data is not available

Format 3: Input of eel seeds (glass eels and eel fry (kuroko)) into aquaculture ponds

Species	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
japonica	kg	3,595	2,992	13,927	6,707	9,380	10,596	5,234	2,524	9,502	8,149	8,185	10,214	7,806	19,195
domestic catch	kg	1,530	1,002	5,489	4,725	1,830	2,717	973	649	4,500	3,228	2,512	2,165	1,330	7,050
imports	kg	2,065	1,990	8,438	1,982	7,550	7,879	4,261	1,875	5,002	4,921	5,673	8,049	6,476	12,145
Other eel species	kg	5,628	13,987	3,165	5,145	3,004	657	3,690	2,959	692	1,297	1,914	1,987	193	120
bicolor	kg	3,508	5,908	2,668	4,986	2,937	590	3,405	393	542	714	880	588	153	30
anguilla	kg	75	0	0	0	0	0	0	0	0	0	0	0	0	0
rostrata	kg	1,726	5,520	498	159	35	35	168	0	5	8	28	0	0	0
mamorata	kg	294	439	0	0	32	32	117	2,566	145	575	1,006	1,399	40	90
mossambica	kg	25	2,120	0	0	0	0	0	0	0	0	0	0	0	0
Total	kg	9,223	16,979	17,093	11,852	12,384	11,253	8,924	5,483	10,194	9,446	10,099	12,201	7,999	19,315

[Notes]

1. Inputs of eel seeds (glass eels and eel fry) into aquaculture ponds are entered by japonica and other eel species, respectively.
2. The data of japonica are entered by domestical caught seeds and imported seeds, respectively.
3. However, eel seeds which transferred by other countries and regions are not included in the data of input of eel seeds.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.
5. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
6. The statistic period of the data related to eel seeds (input of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).

Comments by Members:

Format 4: Aquaculture production

Species	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
japonica	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other eel species	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bicolor	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
anguilla	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
rostrata	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
marmorata	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mossambica	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	tons	4,259	5,149	5,631	9,009	9,836	11,095	10,530	10,885	9,724	15,678	18,131	16,045	15,978	3,277

[Notes]:

1. The data of aquaculture production are entered by japonica and other eel species, respectively.
2. Unit for aquaculture production should be weight (kilograms or metric tons) as far as possible.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Aquaculture production data should be the calendar year.

Comments by Members:

Format 5: Other data on aquaculture

Item	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024-2025
Scale of aquaculture industry	number of aquaculture operators	524	532	536	564	542	555	558	572	592	616	589	646	646	614

[Notes]:

- ① Unit for scale of aquaculture industry may include the number of aquaculture operator or the dimensions of aquaculture ponds.
- ② When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.

Comments by Members:

Format 6: Import of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
japonica	glass eel	kg	2,065	1,990	6,436	1,982	7,550	7,878	4,261	1,875	5,002	4,921	5,673	8,049	6,827	12,186
	eel fry (kuroko)	kg	0	225	5,605	4,499	2,523	2,309	9,062	8,361	2,077	23,120	8,136	4,406	10,013	4,714
Total		kg	2,065	2,215	14,043	6,481	10,073	10,188	13,323	10,236	7,079	28,041	13,809	12,455	16,840	16,900
Other eel species	glass eel	kg	5,628	13,987	3,166	5,145	3,004	667	3,690	2,959	692	1,297	1,914	1,987	1,270	477
	eel fry (kuroko)	kg	1,208	37,717	1,642	10,223	19,078	4,751	14,631	12,727	3,601	4,267	981	1,325	2,353	255
Total		kg	6,836	51,704	5,008	15,368	22,082	5,408	18,321	15,686	4,293	5,564	2,895	3,312	3,623	732

[Notes] :

1. The data of import of eel seeds (glass eels and eel fry) are entered by japonica and other eel species, respectively.
2. The statistic period of the data related to eel seeds (import of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members:

Format 7: Import of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2022-23	2024	2025.5
Anguilla sp.	live eel	tons	137.7	837.0	1,358.8	799.2	615.9	740.6	1,011.9	574.7	2,539.2	1,337.4	2,891	4,489.0	3,501	333.7
	freeze	tons	26.9	43.2	38.3	26.1	63.7	42.1	71.8	55.5	25.3	25.3	125.6	23.6	5	0.1
	cold storage	tons	0.1	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0	0.0
	broiled eel	tons	69.2	66.7	69.6	183.9	308.8	583.9	757.8	784.6	906.9	1,257.3	1,441.3	1,530.9	1,704.9	461.4
	Total	tons	233.9	946.9	1,466.8	1,009.2	988.4	1,366.6	1,841.8	1,414.8	3,471.4	2,620.0	4,457.9	6,043.5	5,210.9	795.2

[Notes] :

- ①The data of import of eel and eel products are entered by japonica and other eel species, respectively.
- ②Examples of type/size of import of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
- ③When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- ④Unit for import of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members: Relevant data is not available by species.

Format 8: Export of eel seeds (glass eels and eel fry)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2025.5
Anguilla sp.	glass eel	kg	0	0	50	0	0	0	0	0	4,560	3,072	0	1,260	0	160
	eel fry (kuroko)	kg	0	0	3,262	0	138	0	0	0	0	0	0	0	0	0
	Total	kg	0	0	3,312	0	138	0	0	0	4,560	3,072	0	1,260	0	160

[Notes] :

1. The data of export of eel seeds are entered by japonica and other eel species, respectively
2. The statistic period of the data related to eel seeds (export of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members: Relevant data is not available by species. Glass eel: below 0.3g & for aquaculture. Eel fry: between 0.3g to 50g & for aquaculture

Format 9: Export of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Anguilla sp.	live eel	tons	79.9	2.3	0.1	0.4	0.0	19.4	0.2	0.0	5.2	3.1	0.0	0.0	0.0	0.0
	freeze	tons	11.1	1.1	0.0	0.1	2.1	23.8	25.2	0.3	11.0	1.0	0.3	1.4	3.8	0.8
	cold storage	tons	0.1	0.0	0.0	0.1	0.0	0.0	0.6	0.0	0.2	1.0	0.1	0.3	0.3	0.0
	broiled eel	tons	0.1	7.3	0.3	1.4	3.3	1.1	4.2	5.9	4.7	42.3	89.2	43.2	3.3	1.5
	Total	tons	91.2	10.7	0.4	2.0	5.4	44.3	30.2	6.2	11.1	47.4	89.6	44.9	7.4	2.3

[Notes] :

1. The data of export of adult eel and eel products are entered by japonica and other eel species, respectively
2. Examples of type/size of export of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for export of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members: Relevant data is not available by species.

Format 10. Mean value of wight and length of Japanese eel

	Unit	When catching	When inputing into aquaculture ponds	When importing	When exporting
glass eel	weight (g)	0.2g	0.2g	below 0.3g	below 0.3g
	body length (cm)	5~7cm	5~7cm	—	—
eel fry	weight (g)	0.3g~199g	—	between 0.3g to 50g	between 0.3g to 50g
	body length (cm)	8~59cm	—	—	—
adult eel	weight (g)	above 200g	—	—	—
	body length (cm)	above 60cm	—	—	—

[Notes]

1. The data of weight and length of Japanese eel into aquaculture ponds are entered by glass eel, eel fry and adult eel, respectively.
 2. The data entered can be either mean value or figures in certain ranges (e.g., XX – YYg or cm). If mean value is available, it should be clearly mentioned in the comments by Members that the mean value of weight and length figures are based on biological or administrative standards or figures obtained from industry associations, etc.
 3. When there are no relevant data or data is not available, "—" should be entered. When data is identified as zero, "0" should be entered.
 4. "Body length" is the length of a fish measured from the tip of the snout to the posterior end of the last vertebra.
- Comments by Members: The data is calculated based on materials submitted by Fresh Water Eel Culture Fisheries Cooperative, not stipulated in national laws.

●Data Sources and/or Methods to collect or estimate the data

(* Please fill in data sources and/or methods to collect or estimate the data entered in from format 1 to format 14 respectively.)

1. Catch of glass eel	Fresh Water Eel Culture Fisheries Cooperative and Fisheries Monitoring Center of Korea Maritime Institute
2. Catch of eel fry (kuroko)	Not Applicable
3. Catch of wild adult eel	Survey of recent trends in fishery production* by Statistics Korea
4. Fishing effort on glass eel	Not Applicable
5. Fishing effort on eel fry (kuroko)	Not Applicable
6. Fishing effort on wild adult eel	Not Applicable
7. Input of eel seeds into aquaculture ponds	Fresh Water Eel Culture Fisheries Cooperative and Fisheries Monitoring Center of Korea Maritime Institute
8. Aquaculture production	Survey of recent trends in fishery production* by Statistics Korea (not managed by species)
9. Scale of aquaculture industry	Local government
10. Import of eel seeds	National Fishery Products Quality Management Service (NFQS)
11. Import of eel and eel products	수산정보포털시스템 (www.fips.go.kr)
12. Export of eel seeds	수산정보포털시스템 (www.fips.go.kr)
13. Export of eel and eel products	수산정보포털시스템 (www.fips.go.kr)
14. Mean value of weight and length of Japanese eel	Fresh Water Eel Culture Fisheries Cooperative and Fisheries Monitoring Center of Korea Maritime Institute

【Revised Standard Working Formats for Eel Statistics (2025)】

Members: Chinese Taipei

Format 1: Data on Catch of Japanese Eel (Data is limited to taken from the wild)

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(*1)
Catch of glass eel	kg	1,912	960	8,250	1,100	3,060	4,500	1,100	2,751	5,244	6,005	1,607	1,850	1,295	6,230
Catch of eel fry (kuroko)(*2)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Catch of wild adult eel (*2)	kg or tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-

【Notes】:

1. The catch data of Japanese eel are entered by glass eel, eel fry and wild adult eel, respectively.
2. Unit for catch of glass eel and eel fry should be weight in kilograms. Unit for adult eel should be weight in metric tons.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (catch of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

Comments by Members:

- *1 The catch of glass eel 2024-2025 season is preliminary data.
 *2 There are no available statistics for eel fry and wild adult eel fishing fisheries in Chinese Taipei.

Format 2: Data on Fishing effort on Japanese eel

Item	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Fishing effort on glass eel	number of licenses (or fishermen, fishing vessels)	-	213	232	250	245	251	272	311	363	374	364	322	301	305
Fishing effort on eel fry (kuroko)(*3)	number of licenses (or fishermen, fishing vessels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fishing effort on wild adult eel(*3)	number of licenses (or fishermen, fishing vessels)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

【Notes】:

1. The data of fishing effort on Japanese eel are entered by glass eel, eel fry and adult eel, respectively.
2. Examples of unit for fishing effort may include the number of licenses, the number of fishermen or the number of fishing vessels. The unit can be chosen in accordance with each domestic legislations.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. The statistic period of the data related to glass eel and eel fry (fishing effort on glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.), while that for "wild adult eel data" should be the calendar year.

Comments by Members:

- *3 There are no available statistics for eel fry and wild adult eel fishing fisheries in Chinese Taipei.

Format 3: Input of eel seeds (glass eels and eel fry (kuroko)) into aquaculture ponds(*4)

Species	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(*5)
japonica	kg	2,210	1,510	12,500	2,800	3,600	7,300	1,030	834	8,144	4,558	887	776	857	3135
domestic catch	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
imports	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other eel species	kg	5,500	10,000	1,450	200	80	100	50	141	124	114	70	52	20	20
bicolor	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
anguilla	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
rostrata	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
marmorata	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mossambica	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	kg	7,710	11,510	13,950	3,000	3,680	7,400	1,080	975	8,267	4,672	957	828	677	3,155

[Notes]:

- Inputs of eel seeds (glass eels and eel fry) into aquaculture ponds are entered by japonica and other eel species, respectively
- The data of japonica are entered by domestical caught seeds and imported seeds, respectively
- However, eel seeds which transferred by other countries and regions are not included in the data of input of eel seeds.
- Unit for catch of glass eel and eel fry should be weight in kilograms.
- When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- The statistic period of the data related to eel seeds (input of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1).

Comments by Members:

*4 Because the eel culture industry in Chinese Taipei has some characteristics, such as several breeding stages and longer seed stocking time, the data would be expressed in total statistics.

*5 The input of glass eel into aquaculture ponds 2024-2025 season is preliminary data from 1st November to 30th April.

Format 4: Aquaculture production(*6)

Species	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024(*7)	2025
japonica	tons	2,244	1,500	1,675	5,187	4,658	3,665	4,204	3,521	1,693	5,044	3,471	2,667	1,273	-
Other eel species	tons	-	404	228	394	154	81	106	142	155	219	152	60	125	-
bicolor	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
anguilla	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
rostrata	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
marmorata	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mossambica	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	tons	2,244	1,904	1,903	5,581	4,812	3,746	4,310	3,663	1,848	5,263	3,623	2,727	1,398	-

[Notes]:

1. The data of aquaculture production are entered by japonica and other eel species, respectively.
2. Unit for aquaculture production should be weight (kilograms or metric tons) as far as possible.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Aquaculture production data should be the calendar year.

Comments by Members:

*6 The eel aquaculture production statistics in Chinese Taipei, which are divided into two categories 'Japanese eel' and 'other eel species', are reported by local governments. Thus, the data would be expressed in total statistics.

*7 The aquaculture production in 2024 is preliminary data.

Format 5: Other data on aquaculture

Item	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024(*8)	2025
Scale of aquaculture industry	number of aquaculture operators	449	305	456	391	392	409	341	241	317	391	330	287	188	-

[Notes]:

- ① Unit for scale of aquaculture industry may include the number of aquaculture operator or the dimensions of aquaculture ponds.
- ② When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.

Comments by Members:

*8 The hectares of aquaculture area in 2024 is preliminary data.

Format 6: Import of eel seeds (glass eels and eel fry)(*9)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(*10)
japonica	glass eel	kg	1,319	664	2,044	631	352	888	2,270	127	2,232	518	433	423	329	1,811
	eel fry (kuroko)	kg	508	708	4,286	60	764	1,950	91	55	7,853	1,273	563	536	73	2,790
Total		kg	1,827	1,372	6,330	691	1,116	2,638	2,361	182	10,085	1,791	996	959	402	4,601
Other eel species(*11)	glass eel	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	eel fry (kuroko)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[Notes]:

1. The data of import of eel seeds (glass eels and eel fry) are entered by japonica and other eel species, respectively.
2. The statistic period of the data related to eel seeds (import of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members:

*9 The CCC(Import and Export Commodity Classification of Chinese Taipei) codes are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220306[Young eel (11-500 pcs per Kg)].

*10 The data of import of eel seeds 2024-25 is from 1st January to 31st Mar.

*11 According to the statistic of Customs Administration, Ministry of Finance and the CCC(Import and Export Commodity Classification of Chinese Taipei) codes, there are no available statistics for other eel species.

Format 7: Import of eel and eel products(*12)

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025(*13)
japonica	live eel	tons	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	broiled eel	tons	0.0	0.0	0.0	0.0	0.1	6.5	0.6	0.0	188.6	37.7	1.0	0.4	0.0	1.8
Other eel species(*14)		tons	10.7	7.7	28.3	4.1	0.6	3.3	2.2	4.2	0.0	0.0	0.0	0.0	0.0	0.0
		tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		tons	11.0	7.7	28.3	4.1	0.9	14.1	2.2	4.2	314.3	62.9	1.7	0.6	0	3

[Notes]:

- ① The data of import of eel and eel products are entered by japonica and other eel species, respectively.
- ② Examples of type/size of import of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
- ③ When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
- ④ Unit for import of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members:

*12 Since 2016 Taiwan has adopted the general trade system, which includes bonded warehouses, logistics centers, and free trade zones in the commodity trade statistics.

*13 The data of import of eel and eel products 2025 is from 1st January to 31st March.

*14 According to the statistic of Customs Administration, Ministry of Finance and the CCC(Import and Export Commodity Classification of Chinese Taipei) codes, there are no available statistics for broiled eel of other eel species.

Format 8: Export of eel seeds (glass eels and eel fry)(*15)

Species	Type/Size	Unit	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25(*16)
japonica	glass eel	kg	869	93	150	0	0	0	260	0	0	228	168	0	535	0
	eel fry (kuroko)	kg	399	21	10	0	101	0	2,888	68	1,062	5,390	974	991	116	0
Total		kg	1,268	114	160	0	101	0	3,146	68	1,062	5,618	1,142	991	651	0
Other eel species(*17)	glass eel	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	eel fry (kuroko)	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[Notes]:

1. The data of export of eel seeds are entered by japonica and other eel species, respectively.
2. The statistic period of the data related to eel seeds (export of glass eel and eel fry) should be the fishing season of glass eel and eel fry ("20XX-XX+1" means the input season which starts from 1st November, 20XX to 31st October, 20XX+1.).
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for catch of glass eel and eel fry should be weight in kilograms.

Comments by Members:

*15 The CCC(Import and Export Commodity Classification of Chinese Taipei) codes are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220305[Young eel (11-500 pcs per Kg)].

*16 The data of Export of eel seeds 2024-25 is from 1st January to 31st Mar.

*17 According to the statistic of Customs Administration, Ministry of Finance and the CCC(Import and Export Commodity Classification of Chinese Taipei) codes, there are no available statistics for other eel species.

Format 9: Export of eel and eel products

Species	Type/Size	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025(*18)
japonica	live eel	tons	1,362.7	866.8	891.6	2,845.1	2,544.4	2,030.4	2,396.4	1,862.3	1,008.1	1,417.3	1,654.1	954.5	475.3	49.7
	broiled eel	tons	370.4	176.0	153.4	561.7	230.2	135.3	162.8	94.4	56.7	238.9	131.3	107.2	40.0	6.3
Other eel species	live eel	tons	95.0	18.6	19.8	13.6	0.0	18.1	48.0	12.9	0.0	0.0	0.0	0.0	0.0	0.0
	broiled eel (*19)	tons	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		tons	1,828.1	1,061.4	1,064.8	3,420.4	2,774.6	2,183.8	2,607.2	1,969.7	1,085.9	1,656.2	1,785.3	1,061.7	515.3	56.0

[Notes]:

1. The data of export of adult eel and eel products are entered by japonica and other eel species, respectively.
2. Examples of type/size of export of eel and eel product may include live eel, frozen eel, chilled eel or broiled eel.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. Unit for export of eel and eel products should be weight (kilograms or metric tons) as far as possible.

Comments by Members:

*18 The data of Export of eel and eel products 2025 is from 1st January to 31st March.

*19 According to the statistic of Customs Administration, Ministry of Finance and the CCC(Import and Export Commodity Classification of Chinese Taipei) codes, there are no available statistics for broiled eel of other eel species.

Format 10. Mean value of weight and length of Japanese eel(*19,20)

	Unit	When catching	When inputting into aquaculture ponds	When importing	When exporting
glass eel	weight (g)				
	body length (cm)				
eel fry	weight (g)				
	body length (cm)				
adult eel	weight (g)				
	body length (cm)				

[Notes]:

1. The data of weight and length of Japanese eel into aquaculture ponds are entered by glass eel, eel fry and adult eel, respectively.
2. The data entered can be either mean value or figures in certain ranges (e.g., XX – YYg or cm). If mean value is available, it should be clearly mentioned in the comments by Members that the mean value of weight and length figures are based on biological or administrative standards or figures obtained from industry associations, etc.
3. When there are no relevant data or data is not available, "-" should be entered. When data is identified as zero, "0" should be entered.
4. "Body length" is the length of a fish measured from the tip of the snout to the posterior end of the last vertebra.

Comments by Members:

*19 Because the eel culture industry in Chinese Taipei has some characteristics, such as several breeding stages and longer seeds stocking time, there are no available statistics for mean value of weight and length of Japanese eel.

*20 According to the statistic of Customs Administration, Ministry of Finance, the CCC(Import and Export Commodity Classification of Chinese Taipei) codes are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220305[Young eel (11-500 pcs per Kg)].

●Data Sources and/or Methods to collect or estimate the data

(* Please fill in data sources and/or methods to collect or estimate the data entried in from format 1 to format 14 respectively.)

1. Catch of glass eel	The data of catch of glass eel originates from the Taiwan Fisheries Statistical Yearbook. The local governments collect the data through regional fisherman's associations and report to Fisheries Agency seasonally. If there is any unreasonable point found, Fisheries Agency will request the local governments recheck and reconfirm. Besides, Japanese eel is the majority of species (<i>Anguilla</i> spp) but it may possibly cover a little of other eel species. The original unit for catch of glass eel is PCs and it has been conversed to weight by the rate of 5,000 PCs/ Kg. Besides, the fishing periods year has been adopted from 2011.Hence, it might be difficult to retrace the original condition, so only reasonable data are provided. The data of 2013 is estimated number, which could be adjusted after confirmed.
2. Catch of eel fry (kuroko)	There are no available statistics for eel fry fishing fisheries in Chinese Taipei.
3. Catch of wild adult eel	There are no available statistics for wild adult eel fishing fisheries in Chinese Taipei.
4. Fishing effort on glass eel	The number of fishing vessel, which is authorized to catch glass eel.
5. Fishing effort on eel fry (kuroko)	There are no available statistics for eel fry fishing fisheries in Chinese Taipei.

6. Fishing effort on wild adult eel	There are no available statistics for wild adult eel fishing fisheries in Chinese Taipei.
7. Input of eel seeds into aquaculture ponds	The data of Japanese eel and other eel are compiled by Taiwan eel farming industry development foundation based on the reports from its member on input.
8. Aquaculture production	The eel aquaculture production statistics in Chinese Taipei, which are divided into two categories 'Japanese eel' and 'other eel species', are reported by local governments. Thus, the data would be expressed in total statistics.
9. Scale of aquaculture industry	The scale of aquaculture is measured by aquaculture area (hectare). The data of aquaculture area originate from the Taiwan Fisheries Statistical Yearbook. The local governments collect the data through the oral questionnaire surveyed by the offices of village, town, or district, and report to Fisheries Agency seasonally. If there is any unreasonable point found, Fisheries Agency will request the local governments recheck and reconfirm. The data of 2013 is estimated number, which could be adjusted after confirmed.
10. Import of eel seeds	The data of importation is derived from the statistic of Customs Administration, Ministry of Finance. The CCC(Import and Export Commodity Classification of Chinese Taipei) code are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220305[Young eel (11-500 pcs per Kg)].
11. Import of eel and eel products	The data of exportation is derived from the statistic of Customs Administration, Ministry of Finance. The CCC(Import and Export Commodity Classification of Chinese Taipei) code are 03019210101(Live Japanese eel), 16041700125(Roasted eel), 16041700116(Prepared eel), 03019210904(<i>Anguilla</i> spp.), 03019210307(<i>Anguilla australis</i>) and 03019210209(<i>Anguilla marmorata</i>). Besides, since 2013, the CCC code of Prepared eel has been changed as 16041700116 and Roasted eel as 16041700125.
12. Export of eel seeds	The data of exportation is derived from the statistic of Customs Administration, Ministry of Finance. The CCC(Import and Export Commodity Classification of Chinese Taipei) code are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220305[Young eel (11-500 pcs per Kg)].
13. Export of eel and eel products	The data of exportation is derived from the statistic of Customs Administration, Ministry of Finance. The CCC(Import and Export Commodity Classification of Chinese Taipei) code are 03019210101(Live Japanese eel), 16041700125(Roasted eel), 16041700116(Prepared eel), 03019210904(<i>Anguilla</i> spp.), 03019210307(<i>Anguilla australis</i>) and 03019210209(<i>Anguilla marmorata</i>). Besides, since 2013, the CCC code of Prepared eel has been changed as 16041700116 and Roasted eel as 16041700125.
14. Mean value of weight and length of Japanese eel	The data of exportation is derived from the statistic of Customs Administration, Ministry of Finance. The CCC(Import and Export Commodity Classification of Chinese Taipei) codes are 3019220109[Glass eel (over 5,000 pcs per Kg)], 3019220207[Eel fry (501-5,000 pcs per Kg)] and 3019220305[Young eel (11-500 pcs per Kg)].

Summary Table of Conservation and Management Measures for Eels (China)

Eel aquaculture		Description
Condition of eel aquaculture business	not ☒ license required	
Ground for license, etc. ※	☒ Legislation/Other scheme	Name of Legislation/other scheme requiring licenses: Decree of the Ministry of Agriculture of the People's Republic of China "Measures for License Issuance and Registration of Aquaculture in Water Areas and Tidal Flats"
Management body	Fisheries Agency	
Contents of management measures		
① Upper limit for the number of licenses	Central/By local authority/ ☒ None	License holders: company/ ☒ facility/others () Data not available
② Upper limit for scale of facilities	☒ Yes ☐ No	
③ Upper limit for input of <i>Anguilla japonica</i>	Central/By local authority/By individual/ ☒ None	This measure will be further considered for future Informal Consultations including complementary measures, possibly taking into account scientific advice from the Scientific Meeting.
④ Upper limit for input of other eels	Central/By local authority/By individual/ ☒ None	This measure will be further considered for future Informal Consultations including complementary measures, possibly taking into account scientific advice from the Scientific Meeting.
⑤ Size limit for input glass eels	Central/By local authority/ ☒ None	Description of regulation:
⑥ Time closure of glass eels input	Central/By local authority/ ☒ None	Description of regulation:
⑦ Other regulation	Central/By local authority/ ☒ None	Description of regulation:
⑧ Body to manage and monitor input of glass eels	Prefectural or provincial eel association	Monitoring measure: Farmers shall report their input amount to the prefectural or provincial eel association by the end of glass eel input.
⑨ Body to manage and monitor production amount	Prefectural or provincial eel association	Monitoring measure: Farmers shall report their production amount to the prefectural or provincial eel association every year.
⑩ Penalty	☒ Yes ☐ No	Penalty for aquaculture operation without licenses: Prohibition of aquaculture
Voluntary measures by industry		

Glass eel fishery		Description
Condition of glass eel fishery	none/license required	
Ground for license, etc. ※	Legislation/Other scheme	Name of Legislation/other scheme requiring licenses: Notice on strengthening the management of eel fry fishing in the Yangtze Estuary no catch management zone and adjacent waters in 2022
Management body	Local authority	
Contents of management measures		License holder: individual/association/others (): From January 1, 2021, the issuance of special fishing licenses for eel fry in the waters within the Yangtze River Estuary has been ceased. At the same time, it is stipulated that in the fishable waters, the number of special fishing licenses for glass eel in 2022 shall not exceed that of 2021, the number of net gear per license shall not exceed 100, and the number of net openings per net gear shall not exceed 1.
① Upper limit for the number of licenses	Central/By local authority/None	Description of regulation: From January 1, 2021, the issuance of special fishing licenses for eel fry in the waters within the Yangtze River Estuary has been ceased. At the same time, it is stipulated that in the fishable waters, the number of special fishing licenses for glass eel in 2022 shall not exceed that of 2021. The number of issued fishing licenses and the number of authorized nets per license must not exceed those of 2021. Each net must have no more than one net mouth, and the operational area specified for each vessel must be reduced by 20 % compared to 2021 (Shanghai).
② Regulation on fishing gear	Yes/No	Description of regulation: The number of net gear per license shall not exceed 100, and the number of net openings per net gear shall not exceed 1.
③ Upper limit for catch	Central/By local authority/By individual/None	Description of limit:
④ Size limit	Central/By local authority/None	Description of limit:
⑤ Time closure of glass eel catch	Central/By local authority/None	Description of regulation: In several coastal fishing provinces, fishing is allowed from the beginning of November to the end of April of the next year.
⑥ Body to manage and monitor catch amount	Local authority	Monitoring measures: Fishers shall report catch data to the local authority and local authorities may report data to the Fishery and Fisheries Administration of the Ministry of Agriculture and Rural Areas.
⑦ Penalty	Yes/No	Penalty for fishing operation without licenses: In case of gross violation (using the net with a mesh size less than 2.5 cm), criminal responsibility will be investigated according to the law, less than 3 years of imprisonment.
Voluntary measures by industry		

Adult eel fishery		Description
Condition of adult eel fishery	☒ none ☐ license required	
Ground for license, etc. ※	Legislation/Other scheme	Name of Legislation/other scheme requiring licenses:
Management body	Local authority	
Contents of management measures	Yes ☒ No ☐	License holders: individual/association/others () Total number of licenses issued: Number of fishers:
① Upper limit for the number of licenses	Central/By local authority ☒ None ☐	Description of regulation:
② Regulation on fishing gear	Yes ☒ No ☐	Description of regulation:
③ Upper limit for catch	Central/By local authority/By individual ☒ None ☐	Description of limit:
④ Size limit	Central/By local authority ☒ None ☐	Description of limit:
⑤ Time closure	Central/By local authority ☒ None ☐	Description of regulation:
⑥ Body to manage and monitor catch amount		Monitoring measures:
⑦ Penalty	Yes ☒ No ☐	Penalty:
Voluntary measures by industry		

Additional information

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Summary Table of Conservation and Management Measures for Eels (Japan)

Eel aquaculture		Description
Condition of eel aquaculture business	no license required	
Ground for license, etc. ※	Legislation/Other scheme	Name of Legislation/other scheme requiring licenses: Inland Water Fishery Promotion Act enacted on June 27, 2014 and Order for enforcement of Inland Water Fishery Promotion Act established on October 1st 2014. Establishment date: June 27, 2014
Management body	Fisheries Agency	
Contents of management measures		
① Upper limit for the number of licenses	Central/By local authority/None	License holders: company/facility/others () Total number of Licenses issued: 442 for <i>A. japonica</i> , 103 for eels other than <i>A. japonica</i> (November 2024 - October 2025, as of November 1, 2024)
② Upper limit for scale of facilities	Yes/No	Description of regulation: total area of aquaculture ponds written in a permit.
③ Upper limit for input of <i>Anguilla japonica</i>	Central/By local authority/By individual/None	The quota for each individual farmer is set within the total upper limit. Total upper limit for <i>A. japonica</i> is 21.7 tons.
④ Upper limit for input of other eels	Central/By local authority/By individual/None	The quota is set for each individual farmer within the total upper limit. Total upper limit for eels other than <i>A. japonica</i> is 3.5 tons.
⑤ Size limit for input glass eels	Central/By local authority/None	Description of regulation:
⑥ Time closure of glass eels input	Central/By local authority/None	Description of regulation:
⑦ Other regulation	Central/By local authority/None	Description of regulation: - When farmers sell their farmed eels to other farmers' aquaculture operation, sellers shall provide the document about trade records to buyers. - In case farmers conduct aquaculture operation of eels other than <i>A. japonica</i> , they are prohibited to release the eels to waters outside of their facility. The farmers shall take necessary measures to prevent their escape.
⑧ Body to manage and monitor input of glass eels	Fisheries Agency	Monitoring measure: Farmers shall report their input amount to the Fisheries Agency every month.
⑨ Body to manage and monitor production amount	Fisheries Agency	Monitoring measure: Farmers shall report their production amount to the Fisheries Agency every month.
⑩ Penalty	Yes/No	Penalty for aquaculture operation without licenses: up to 3 years of imprisonment or a penalty of up to 2 million yen. Penalty for exceeding individual input quota of eel seeds: up to 3 years of imprisonment or a penalty of up to 2 million yen.
Voluntary measures by industry		

Glass eel fishery		Description
Condition of glass eel fishery	none License required	
Ground for license, etc. ※	Legislation Other scheme	Name of Legislation/other scheme requiring licenses: Prefectural Fisheries Coordination Regulation based on the Fisheries Act and the Act on the Protection of Fisheries Resources
Management body	Local authority	
Contents of management measures		License holder: individual association /others() Total number of licenses issued: 7,321 Number of fishers: 15,406 (2023-2024 fishing season)
① Upper limit for the number of licenses	Central By local authority /None	Description of regulation: License holders are limited to Fisheries Associations, members of Fisheries Associations, eel farmers and so on.
② Regulation on fishing gear	Yes No	Description of regulation: Limitation of fishing gears and fishing types are introduced in each prefecture.
③ Upper limit for catch	Central By local authority By individual /None	Description of limit: Catch quota is set based on historical catch amount, area of aquaculture pond and so on.
④ Size limit	Central By local authority /None	Description of limit: Size limit is introduced in each prefecture.
⑤ Time closure of glass eel catch	Central By local authority /None	Description of regulation: In many fishing grounds, fishing is allowed from December to April in the following year.
⑥ Body to manage and monitor catch amount	Local authority	Monitoring measures: Fishers shall report catch data to the local authority and local authorities may report data to the Fisheries Agency.
⑦ Penalty	Yes No	The penalty for catching glass eels without a fishing permit will be an imprisonment of up to 3 years or a fine of up to 30 million yen
Voluntary measures by industry		

Adult eel fishery		Description
Condition of adult eel fishery	none license required	
Ground for license, etc. ※	Legislation/Other scheme	Name of Legislation/other scheme requiring licenses: Prefectural Fisheries Coordination Regulation and other regulations based on the Fisheries Act and the Act on the Protection of Fisheries Resources
Management body	Local authority	
Contents of management measures	Yes/No	License holders: individual/association/others () Total number of licenses issued: Number of fishers:
① Upper limit for the number of licenses	Central/By local authority/None	Description of regulation:
② Regulation on fishing gear	Yes/No	Description of regulation: Limitation of fishing gears and fishing types are introduced in each Prefectures.
③ Upper limit for catch	Central/By local authority/By individual/None	Description of limit:
④ Size limit	Central/By local authority/None	Description of limit: Size limit is introduced in each prefecture. Lower size limit is 20cm - 30cm in most regions.
⑤ Time closure	Central/By local authority/None	Description of regulation: Time closure is introduced in each prefecture, mainly from October to March when eels migrate from river to sea for spawning.
⑥ Body to manage and monitor catch amount		Monitoring measures:
⑦ Penalty	Yes/No	Penalty: up to 6 months of imprisonment or a penalty of up to 100,000 yen for violation of Regional Fisheries Coordination Regulation. Up to 1 year of imprisonment or a penalty of up to 500,000 yen for violation of Instruction by Fisheries Adjustment Commission.
Voluntary measures by industry		In July 2018, National Federation of Inland Waters Fishing Ground Management Commissions and National Federation of Inlandwater Fisheries Cooperatives jointly adopted the resolution on promoting nationwide conservation of eels migrating from river to sea for spawning.

Additional information

From December 2025, Act on Ensuring the Proper Domestic Distribution and Importation of Specified Aquatic Animals and Plants will apply to eels (less than 13 cm), requiring the communication of handling information among distributors and traders, the preparation and preservation of transaction records, and the attachment of documents attesting that the product was harvested legally when it is exported.

Summary Table of Conservation and Management Measures for Eels (Korea)

Eel aquaculture		Description
Condition of eel aquaculture business	none/ <u>license required</u>	Article 43 of the Aquaculture Industry Development Act (Authorization of farming) stipulates that eel farming is subject to authorization (enacted on August 27, 2019 and took effect on August 27, 2020)
Ground for license, etc. ※	<u>Legislation</u> /Other scheme	Article 43 of the Aquaculture Industry Development Act (Authorization of farming) stipulates that eel farming is subject to authorization (enacted on August 27, 2019 and took effect on August 27, 2020)
Management body	System management: Inland Fishery Industry Team; Aquaculture Industry Division, Ministry of oceans and	Acceptance of a report: Local authority
Contents of management measures		
① Upper limit for the number of licenses	Central/By local authority/ <u>None</u>	License holders: company/facility/ <u>others</u> (Individual) Total number of reports: 614 as of 2024
② Upper limit for scale of facilities	Yes/ <u>No</u>	Description of regulation:
③ Upper limit for input of <i>Anguilla japonica</i>	Central/By local authority/ <u>By individual</u> /None	Fresh Water Eel Culture Fisheries Cooperative composed of eel farmers self-regulates the input: Upper limit for <i>A. japonica</i> input is set at 11.1 tons.
④ Upper limit for input of other eels	Central/By local authority/ <u>By individual</u> /None	Fresh Water Eel Culture Fisheries Cooperative composed of eel farmers self-regulates the input: Upper limit for input of eels other than <i>A. japonica</i> is set at 14.0 tons in total.
⑤ Size limit for input glass eels	Central/ <u>By local authority</u> /None	Description of regulation: Fisheries Resource Management Act article 35, Enforcement Decree article 18, Enforcement Regulation article 17 / a glass eel to weigh below 0.3 grams
⑥ Time closure of glass eels input	Central/By local authority/ <u>By individual</u> /None	Description of regulation:
⑦ Other regulation	Central/By local authority/ <u>By individual</u> /None	Description of regulation:
⑧ Body to manage and monitor input of glass eels	Fresh Water Eel Culture Cooperatives	Monitoring measure: Fresh Water Eel Culture Fisheries Cooperative investigate by farm
⑨ Body to manage and monitor production amount	Fresh Water Eel Culture Cooperatives	Monitoring measure; legislation to be enacted through amendment of "Fishery products distribution management and support Act" (2 Dec 2016) and Enforcement regulations (Jun 2017) to distribute eels at designated locations. Enforcement Regulation article 7.2(2 July 2018)
⑩ Penalty	<u>Yes</u> /No	Penalty for aquaculture operation without license: penalty of maximum 5 million won Penalty for excess of input limit: None If not distributed at the designated place: imprisonment of 2 years or less or fine of 20 million won or less
Voluntary measures by industry		Compliance with the "Joint Statement" agreed by the Informal Eel meeting participants

Glass eel fishery		Description
Condition of glass eel fishery	none license required	Approval required/ Inland Water Fishery Act, Fisheries Act
Ground for license, etc. ※	Legislation/Other scheme	Name of Legislation/other scheme requiring licenses: Fisheries Act Article 41.3 (glass eel stow-net fishery), Inland Water Fishery Act Article 9(Inland Water seed harvest approval) Establishment date or estimated date to be established: Fisheries Act enforced 23 Apr 2010, Inland Water Fishery Act enforced 29 Jul 2000 (approval required since Inland Water Fisheries Development Promotion Act(09 Jul 1976))
Management body	System Management: Inland Fishery Industry Team, Aquaculture Industry Division, Ministry of oceans and	Approval: Local authority
Contents of management measures		License holder: individual/association/others() Total number of licenses issued: Number of approval: 517(the total number including not only glass eel but all other seed capture) as of 2022
① Upper limit for the number of licenses	Central/By local authority/None	Description of regulation:
② Regulation on fishing gear	Yes/No	Description of regulation: glass eel stow-net fishery(Enforcement Decree of the Fisheries Act Article 23)
③ Upper limit for catch	Central/By local authority/By individual/None	Description of limit:
④ Size limit	Central/By local authority/None	Description of limit:
⑤ Time closure of glass eel catch	Central/By local authority/None	Description of regulation:
⑥ Body to manage and monitor catch amount	Central and local authority	Monitoring measures: controlling unauthorized captures of glass eels
⑦ Penalty	Yes/No	Penalty for fishing operation without licenses: Less than 1 years of imprisonment or a penalty of less than 10 million
Voluntary measures by industry		

※: Attach the legal text, if there is an English version.

Adult eel fishery		Description
Condition of adult eel fishery	no license required	Approval required
Ground for license, etc. ※	Legislation/Other scheme	Name of Legislation/other scheme requiring licenses: Inland Water Fishery Act Article 6, 9 and 11 Establishment date or estimated date to be established: Inland Water Fishery Act(29 Jul 2000)
Management body	System Management: Inland Fishery Industry Team, Aquaculture Industry Division, Ministry of oceans and	Approval: Local authority
Contents of management measures		License holder: individual/association/others() Total number of licenses issued: Number of fishers: Approval is issued not by fish species but by type of fishing gears, thus, the exact number cannot be confirmed.
(1) Upper limit for the number of licenses	Central/By local authority/None	Description of regulation:
(2) Regulation on fishing gear	Yes/No	Description of regulation: pound net, longline, fish trap
(3) Upper limit for catch	Central/By local authority/By individual/None	Description of limit:
(4) Size limit	Central/By local authority/None	Description of limit: 15cm-45cm
(5) Time closure	Central/By local authority/None	Description of regulation: six months closure(1 October – 31 March)
(6) Body to manage and monitor catch amount	Central and local authority	Monitoring measures: controlling unauthorized captures of adult eels
(7) Penalty	Yes/No	Penalty for fishing operation without licenses: Less than 1 years of imprisonment or a penalty of less than 10 million
Voluntary measures by industry		

※ Attach the legal text, if there is an English version.

Additional information

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Summary Table of Conservation and Management Measures for Eels (Chinese Taipei)

Eel aquaculture		Description
Condition of eel aquaculture business	none license required	
Ground for license, etc. ※	Legislation/Other scheme	Name of Legislation/other scheme requiring licenses: Regulations for Input Management of Eel Aquaculture Establishment date or estimated date to be established: November 14, 2014
Management body	Ministry of Agriculture	
Contents of management measures		
① Upper limit for the number of licenses	Central/By local authority/None	License holders: company/factory/others (Eel farmer). Total number of Licenses issued: 312 licenses in 2024-2025
② Upper limit for scale of facilities	Yes/No	Description of regulation:
③ Upper limit for input of <i>Anguilla japonica</i>	Central/By local authority/By individual/None	
④ Upper limit for input of other eels	Central/By local authority/By individual/None	
⑤ Size limit for input glass eels	Central/By local authority/None	Description of regulation:
⑥ Time closure of glass eels input	Central/By local authority/None	Description of regulation:
⑦ Other regulation	Central/By local authority/None	Description of regulation:
⑧ Body to manage and monitor input of glass eels	Fisheries Agency/ Local authority/Taiwan Eel Farming Industry Development Foundation/Local eel	Monitoring measure: The eel farmer should report the input amount of eel within 10 days after inputting eel.
⑨ Body to manage and monitor production	Fisheries Agency/ Local authority/Taiwan Eel Farming Industry Development Foundation/Local eel	Monitoring measure: The eel farmer's production should not exceed the input amount.
⑩ Penalty	Yes/No	Penalty for aquaculture operation without licenses: A fine of between NTD\$ 30,000 and NTD\$ 150,000. Penalty for excess of input limit: A fine of between NTD\$ 30,000 and NTD\$ 150,000.
Voluntary measures by industry		

Glass eel fishery		Description
Condition of glass eel fishery	none <u>license required</u>	Most of the catching glass eels are from fishing vessel, so main management measures are for vessel. Vessels approved by
Ground for license, etc. ※	<u>Legislation</u> /Other scheme	Name of Legislation/other scheme requiring licenses: Fisheries Act/Regulations on the Restricted Fishing Seasons for E/vers/ Directions of the coastal Elvers Fishing Establishment date or estimated date to be established: Existing legislation/September 9, 2013/ November 27, 2013
Management body	Ministry of Agriculture/Local government	
Contents of management measures		License holders: individual/association/ <u>others</u> (Vessel) Total number of licenses issued:305 Number of fishers:
① Upper limit for the number of licenses	<u>Central</u> /By local authority/ <u>None</u>	Description of regulation: Vessels approved by the central or municipal competent authorities for operating the "fishing fry" fishery are allowed to use fishing gear such as scraping nets and stow nets to catch glass eel/seals(Fisheries Act
② Regulation on fishing gear	<u>Yes</u> /No	Description of regulation: Scraping nets and stow net driven by vessel.
③ Upper limit for catch	Central/By local authority/By individual/ <u>None</u>	Description of limit:
④ Size limit	Central/By local authority/ <u>None</u>	Description of limit:
⑤ Time closure of glass eel catch	<u>Central</u> /By local authority/ <u>None</u>	Description of regulation: Between March 1 and October 31 every year.
⑥ Body to manage and monitor catch amount	By local authority and local fishermen's association	Monitoring measures: The glass eel fishermen are advised to report the catch amount to local fishermen's association.
⑦ Penalty	<u>Yes</u> /No	Penalty for fishing operation in time closure: A fine of between NT\$ 30,000 and NT\$ 150,000.
Voluntary measures by industry		

※ Attach the legal text, if there is an English version.

Adult eel fishery		Description
Condition of adult eel fishery	☒ None ☐ License required	
Ground for license, etc. ※	Legislation ☒ Other scheme	Name of Legislation/other scheme requiring licenses : "Fishing bans and closed seasons" area Establishment date or estimated date to be established : Since 2013
Management body	Local authority	
Contents of management measures		License holders: individual/association/others () Total number of licenses issued: Number of fishers:
① Upper limit for the number of licenses	Central/By local authority ☒ None	Description of regulation:
② Regulation on fishing gear	☒ Yes ☐ No	Description of regulation: According to each management measures of "fishing bans and closed seasons" area, it is forbidden to catch aquatic animals in any way or with nets.
③ Upper limit for catch	Central/By local authority/By individual ☒ None	Description of limit:
④ Size limit	Central/By local authority/None	Description of limit: Excess of the length of 8cm elver
⑤ Time closure	Central/By local authority/None	Description of regulation: The entire year in closed eel fishing area
⑥ Body to manage and monitor catch	By local authority	Monitoring measures: Prohibited the catch of young and adult eels in 41 rivers in Taiwan
⑦ Penalty	☒ Yes ☐ No	Penalty for fishing operation in "fishing bans and closed seasons" area: A fine of between NTDS 30,000 and NTDS
Voluntary measures by industry		

※ Attach the legal text, if there is an English version.

Additional information

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