联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Alimentación y la Agricultura | منظمة الأغذية والزراعة للأمم المتحدة

EUROPEAN INLAND FISHERIES AND AQUACULTURE ADVISORY COMMISSION

Thirty-First Session

Killarney, Ireland, 22 to 24 June 2022

Report on the work of EIFAAC for the 33rd Regional Conference for Europe

Executive Summary

Due to the COVID-19 pandemic and associated travel restrictions, the Thirty-first Session of the European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC) was postponed from September 2021 based on the agreement of the host country, the Management Committee of EIFAAC, and FAO. The Thirty-first Session of EIFAAC will be hosted by the Government of Ireland on 22–24 June 2022 in Killarney.

Given the postponement of the Session, instead of the Commission Report from the Thirty-first Session of EIFAAC, a document was prepared that summarizes the intersessional activities and outcomes of the Commission since the Thirtieth Session, held in September 2019 in Dresden, Germany.

Suggested action by the Conference

The Regional Conference is invited to review the summary report on EIFAAC activities and to:

- Call upon Members to nominate and support their official focal points to EIFAAC, as the only pan-European commission on inland fisheries and aquaculture, and to encourage other countries and non-governmental organizations in the region to participate in EIFAAC sessions as observers.
- Encourage Members to join EIFAAC projects of regional interest.

I. Background

1. Inland waterway management is complex and faces unique challenges. Freshwater resources in Europe's rivers and lakes have a variety of users, and some of these can interfere with the health and diversity of aquatic ecosystems. The mixture and overlap of local, regional, national and at times international regulations exacerbate the problem of the sustainable management of inland water resources, including the development of freshwater aquaculture. The lack of accurate valuation of the contribution of inland fisheries and aquaculture to food security, riparian livelihoods and the economics of the fish value chain prevents evidence-based policy decisions on the allocation of freshwater resources among the competing uses. In the face of changing climatic conditions that have already had impact on the availability and quality of water resources in Europe, finding solutions to these conflicting uses has become more urgent.

2. EIFAAC is a pan-European network, established in 1957 as an Article VI statutory body of FAO. The first EIFAC Session was held in 1960 in Dublin, Ireland. A total of 30 sessions have been conducted by the Commission since then. EIFAAC currently has 33 Member Nations and the European Union as a Member Organization. During the past 60 years, sessions have been held in Austria, Croatia, Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Scotland, Sweden, Switzerland, Turkey, the United Kingdom of Great Britain and Northern Ireland, and Yugoslavia.

3. Official focal points are nominated to represent their respective governments to the Commission, participate in EIFAAC projects on inland fisheries and aquaculture of interest to their countries, and contribute to the session reports that guide the intersessional work programme of the Commission in line with FAO's strategic objectives (*the four betters*), the United Nations Sustainable Development Goals, and other regional and international objectives. Governments can nominate their official focal points by writing to the EIFAAC Secretariat.

II. Intersessional activities: 2019–2022

EIFAAC Symposium and Thirty-first Session of EIFAAC, June 2022

4. The EIFAAC Symposium will be held on 20–22 June 2022 in Killarney,[1] Ireland, and is hosted by Inland Fisheries Ireland (IRI) and the Department of Environment, Climate and Communications of Ireland. The EIFAAC Symposium on "Inland fisheries and aquaculture – advances in technology, stock assessment and citizen science in an era of climate change" has five thematic areas: 1) inland fish stock assessment; 2) developments in freshwater fish monitoring technologies, with an emphasis on non-destructive methods; 3) the problems and challenges of climate change and its impacts on inland aquatic resources and fisheries; 4) citizen science; and 5) aquaculture – traditional freshwater systems vs recirculation systems.

5. The Thirty-first Session of EIFAAC was postponed from September 2021 in the hope of holding a physical meeting, traditionally linked to the EIFAAC Symposium dates and venue, to facilitate interaction among scientists and policymakers leading to evidence-based policies for inland fisheries and aquaculture of Europe. The Thirty-first Session is scheduled for 22–24 June 2022 in Killarney, Ireland, immediately following the Symposium. The Government of Ireland, in close cooperation with the EIFAAC Secretariat in the FAO Regional Office for Europe and Central Asia, is making the necessary preparations for a successful Symposium and Session in 2022.[2]

[1] Information about abstract submission and registration for the EIFAAC Symposium 2022 can be found on the IFI website at https://fisheriesireland.ie/news/events/eifaac-symposium-2022.

[2] The provisional agenda of the Session and background documents will become available on the EIFAAC website at https://www.fao.org/fishery/en/organization/22050/en.

Management Committee

6. The Management Committee (MC) held monthly virtual meetings during the intersessional period. The last physical meeting of the MC took place in Budapest, Hungary, in 2019. An annual physical meeting was planned for Rome, Italy, in July 2020 to coincide with the Committee on Fisheries (COFI), but this was cancelled due to the pandemic. Another MC physical meeting was planned for October 2021 in Brussels, Belgium, and this was also cancelled as a result of the evolving pandemic situation in the region. A virtual meeting of the MC and Technical and Scientific Committee (TSC) members was held jointly in October 2021 to discuss the ongoing projects and preparations for the EIFAAC Symposium 2022.

7. The MC members and the FAO Secretariat began implementation of the EIFAAC **Communication Strategy and Plan** approved at the Thirtieth Session in Dresden, Germany.[3] Numerous articles were published to raise awareness of EIFAAC projects, and the Chair of EIFAAC (Finland) presented EIFAAC work at the Global Fishery Forum and Seafood Expo, held 8–10 September 2021 in St. Petersburg, Russian Federation, under a session on regional fishery bodies established within FAO.

Technical and Scientific Committee

8. The Technical and Scientific Committee (TSC) develops projects and approves project proposals and overseas project implementation under the overall umbrella of the EIFAAC. The scientific data and conclusions generated by EIFAAC projects play an important role in policy development at regional, national and subnational levels. EIFAAC, as a regional network, contributes to United Nations Sustainable Development Goal 17 on partnerships by facilitating South-South and triangular cooperation among the various national fisheries institutes of Northern, Central and Eastern Europe and the Western Balkans. In addition, the joint EIFAAC, International Council for the Exploration of the Sea (ICES), and General Fisheries Commission of the Mediterranean (GFCM) Project on Eels provides EIFAAC technical expertise for improved scientific guidance on the management of European eels, a critically endangered species.

Recently launched EIFAAC projects

9. In 2020, the TSC prepared draft concept notes for six project proposals based on priority needs raised by EIFAAC Members. These six proposals were approved by the MC in 2020 and officially launched in 2021. The themes were developed based on common challenges facing the management of inland fisheries and freshwater aquaculture in Europe. Invitations were circulated to official focal points for expressions of interest to join the new projects:

1) The problems and challenges of climate change and its impact on inland aquatic resources and fisheries of Europe.
2) Interactions of inland fisheries and aquaculture with other freshwater uses: conflict identification and potential benefits[4].
3) Environmental DNA in freshwater fisheries, current status and future possibilities.

[3] The EIFAAC Strategy Plan 2020–2024, the EIFAAC Communication Strategy and Plan, the EIFAAC Workplan 2020–2021 are available as annexes of the report of the Thirtieth Session of the Commission, available at https://www.fao.org/3/ca7495en/ca7495en.pdf.

[4] In this context the "conflict identification" refers to conflicts that affect inland fisheries and fish habitat such as hydropower dams, irrigation for agriculture, river dredging, flood control, etc.

4) Determination of economic, cultural and social values of inland fisheries and freshwater aquaculture in Europe.
5) Fish stocking guidelines, including general principles, best practices, economic aspects, interaction with natural stocks and safeguarding biodiversity.
6) Downstream passage of fish at hydropower dams.

10. Those countries expressing interest attended virtual meetings in 2021 to further develop the projects. Table 1 contains information on the status of the new projects. As these projects are in the early stages, EIFAAC Members and observers are encouraged to join one or more of the projects, depending on which topics are a priority in their countries, to ensure broad member participation leading to regional outcomes.

TABLE 1: EIFAAC projects launched in 2021

PROJECT	PARTICIPATING COUNTRIES	PROJECT MANAGER
Climate change	Croatia, Czechia, Finland, Germany, Ireland	TBD
Conflict identification	Croatia, Czechia, Finland, Germany, Hungary	TBD
Environmental DNA	Austria, Czechia, Denmark, Finland, Germany, Greece, Ireland, Norway, Spain, Switzerland, United Kingdom of Great Britain and Northern Ireland	Reinhold Hanel (Germany) Thuenen Institute of Fisheries Ecology
Economic and social value	Croatia, Czechia, Denmark, Finland, France, Germany, Ireland, Latvia, the Netherlands	TBD
Fish stocking guidelines	Austria, Croatia, Czechia, Finland, Germany, Ireland, Latvia, Romania	Marina Piria (Croatia) University of Zagreb, Department of Fisheries, Bee Keeping, Game Management and Spec. Zoology
Downstream passage	Belgium, Denmark, Finland, France, Germany, Ireland, the Netherlands, Norway, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland	Teppo Vehanen (Finland) Natural Resources Institute Finland

Project status and outcomes of completed and ongoing projects: 2019–2021

11. EIFAAC project "Welfare of fishes in aquaculture." This project began in 2015 and was completed in 2019. Mr Helmut Segner (Switzerland, University of Bern – Centre for Fish and Wildlife Health) was the project manager. He obtained a EUR 3 000 external grant from Switzerland to fund project activities. The report of the project was published by FAO as Circular 1189, Budapest, 2019.[5]

12. EIFAAC project "European Standard for fish pass monitoring." The project started in 2014 under project managers Ms Emma Washburn (United Kingdom of Great Britain and Northern Ireland, Environment Agency) and Mr Jon Hateley (United Kingdom of Great Britain and Northern Ireland,

[5] The document *Welfare of fishes in aquaculture* is available at https://www.fao.org/publications/card/en/c/CA5621EN/.

Environment Agency). Fourteen countries participated, and the project was completed in 2021 with the publication by the European Committee for Standardization (CEN) of standard EN 17233:2021 on "Water quality – guidance for assessing the efficiency and related metrics of fish passage solutions using telemetry."[6] EIFAAC contributed to this outcome by developing a draft European standard for monitoring fish passes using telemetry. This standard ensures that optimum fish pass designs are identified and shared throughout European countries, resulting in improved compliance towards objectives of the European Union's Water Framework Directive (WFD). CEN standard EN 17233:2021 specifies standardized methods for assessing the efficiency and related metrics of fish passage solutions using telemetry techniques that allow individual fish approaching an impediment to be monitored. It covers studies using fish that have been electronically tagged with acoustic, passive integrated transponder or radio tags in order to provide a variety of defined passage efficiency metrics. The standard includes both upstream and downstream passage of fish. It provides recommendations and requirements for equipment, study design, data analysis and reporting.

13. EIFAAC project "Capacity development on systems and methodologies of data collection in inland fisheries." This project was proposed by FAO and funded under a Technical Cooperation Programme project (TCP/RER/3706) through a letter of agreement between FAO and Natural Resources Institute/Luonnonvarakeskus, Finland. The project was approved by the TSC in 2019, and work was completed in 2021. The project manager was Teppo Vehanen (Finland, Natural Resources Institute Finland). Twenty-six experts participated from Croatia, Czechia, Denmark, Finland and Ireland. The experts provided country case studies on data systems for inland fisheries in Europe in a report that was published by FAO as technical paper 649, Budapest, 2020, in English and Russian.[7] Experts from EIFAAC institutions were invited to an expert meeting to review draft FAO guidelines on data systems for the West Balkans region in Skopje, North Macedonia, in March 2020. Unfortunately, this meeting was cancelled due to COVID-19 travel restrictions. EIFAAC experts provided their review via email correspondence. The guidelines were published as FAO Circular 1218, Budapest, 2021, in four languages: Albanian, English, Montenegrin and North Macedonian.[8] In addition, the Chair of the TSC participated as a trainer in a regional workshop in November 2022 under project TCP/RER/3706, namely, to raise the capacities of beneficiary countries in the West Balkans on good practices in data systems for inland fisheries.

14. EIFAAC project "Aquatic Invasive Species in Europe." This project started in 2012 and is ongoing. The project manager is Ms Marina Piria (Croatia, University of Zagreb, Department of Fisheries, Bee Keeping, Game Management and Spec. Zoology). The project facilitates the European-wide Invasive Species (FINS) symposia held periodically. The first FINS was hosted by Ireland in 2013. The second FINS was hosted by Croatia in 2016. The third FINS is to be hosted by Hungary. Funding and organization of the FINS symposia are by host institutions, and the symposium reports are published by FAO.[9] The project has also produced articles in scientific journals.[10]

[6] The document *Water quality - Guidance for assessing the efficiency and related metrics of fish passage solutions using telemetry* is available at https://standards.iteh.ai/catalog/tc/cen/649a49d1-a61c-474b-ae80-9a582da0598b/cen-tc-230-wg-24.

[7] The document *Data collection systems and methodologies for the inland fisheries of Europe* is available at https://www.fao.org/publications/card/en/c/CA7993EN/.

[8] The document *Good practices guidelines for data collection systems to support sustainable inland and recreational fisheries in the Western Balkans region* is available at https://www.fao.org/documents/card/en/c/cb3261en/

[9] The document *Aquatic invasive alien species – top issues for their management* is available at https://www.fao.org/publications/card/en/c/e33ecc7b-54c7-4e4b-982b-44e9fbc58071/

[10] The document *Tackling invasive alien species in Europe: the top 20 issues* is available at https://www.reabic.net/journals/mbi/2014/1/MBI_2014_Caffrey_etal.pdf

15. EIFAAC project "Developing Advice on Sustainable Management Actions on Cormorant Populations." The project manager is Mr Niels Jepsen (Denmark, Technical University of Denmark – National Institute of Aquatic Resources). Although the topic of predation by cormorants is a regional priority, especially in light of the economic impacts on aquaculture farmers and governments that make payments for fish losses, this project has not produced an outcome. Status is ongoing.

16. EIFAAC project "Citizen Science Workshop." The project manager is Ms Ciara O'Leary (Ireland, Inland Fisheries Ireland). The workshop on citizen science was scheduled for November 2020 in Finland. However, due to the COVID-19 pandemic, the workshop did not take place, and the project funding by the Government of Finland could not be carried over to 2021. As an alternative output, the project team produced an article for a scientific journal (forthcoming).

Joint EIFAAC/ICES/GFCM Working Group on Eel (WGEEL)

17. WGEEL is a working group consisting of eel experts from EIFAAC, ICES, and GFCM. The project coordinator is Mr Alan Walker (United Kingdom of Great Britain and Northern Ireland, Centre for Environment Fisheries and Aquaculture Science). WGEEL convenes annually, usually in September after the glass eel arrival season. In 2020, the working group meeting was planned to be held in Rabat, Morocco. However, due to COVID-19 travel restrictions, 46 participants from 20 countries met by correspondence and video conference from 21 to 28 September 2020. This conference assessed the state of the European eel, investigated the effects of habitat loss on the eel stock and its management, reviewed and updated the Stock Annex, prepared the 2021 data call, and reported on any updates to the scientific basis of the WGEEL advice from new and emerging threats or opportunities. Furthermore, data on fisheries landings, aquaculture and restocking were presented.

18. In 2021, 64 participants from 26 countries met by correspondence and video conference from 7 to 10 September and from 27 September to 4 October to assess the state of the European eel and its fisheries, investigate the effects of contaminants on the reproductive capacity of the eel stock, discuss the findings of the ICES Workshop on the Future of Eel Advice (WKFEA), identify issues specific to the Mediterranean region, and report on any update to the scientific basis of the advice, new and emerging threats or opportunities.

19. For a better integration of the Mediterranean area, new members joined WGEEL, providing data and support as regional experts. This is considered an important step in a continuous process to identify and address Mediterranean-specific issues and harmonize the efforts of WGEEL and the recent "GFCM research Programme on European Eel."[11]

20. On 4 November 2021, ICES issued European eel advice[12] that when the "precautionary approach" is applied, there should be zero catches of eel in all habitats. This applies to both recreational and commercial catches and includes catches of glass eels for restocking and aquaculture. Regarding the impact of non-fisheries anthropogenic factors (e.g. hydropower, habitat loss, pollution), ICES highlights that these should be minimized or reduced to zero where possible. ICES further notes that the restocking of eels (the practice of adding eels to a waterbody from another source) is considered a "conservation measure" in the European Union regulation and in many eel management plans for achieving the 40 percent escapement target on all eel management units. However, restocking is reliant on a glass eel fishery catch, which is in contradiction with the current advice.

[11] For more information, see https://www.fao.org/gfcm/researchprogramme-europeaneel/en/.

[12] The document *ICES Advice on fishing opportunities, catch, and effort* is available at https://www.ices.dk/sites/pub/Publication%20Reports/Advice/2021/2021/ele.2737.nea.pdf.

ICES acknowledges that catches may serve conservational purposes, e.g. to aid migration across barriers within the same waterbody. Assuming that overall mortality is reduced by such measures, the advice does not apply. Upstream migration should, however, be assisted only if the future escapement of silver eels can be ensured.

21. EIFAAC notes that the ICES 2021 advice is incongruent with the 2007 European Eel Regulation[13] establishing measures for the recovery of the stock. The regulation commits Members to preparing an eel management plan for each eel management unit (as defined by Members) to reduce anthropogenic mortalities so as to permit with high probability the escapement to the sea of at least 40 percent of the silver eel biomass relative to the best estimate of escapement that would have existed if no anthropogenic influences had impacted the stock. The national eel management plans were prepared with the purpose of achieving this objective in the long term. In the absence of an eel management plan, Members were obliged to either reduce fishing effort by 50 percent (relative to the 2004–2006 average) or reduce effort to achieve at least 50 percent reduction in catches.

[13] For more information, see https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32007R1100.