

Reply from Irish Government to IFM Letter on Salmon Conservation

Our Ref: CCAE-MO-01110-2023

27th July 2023

Dear Mr Bunt

I refer to your recent correspondence in relation to Atlantic salmon becoming extinct in some of our rivers.

I have been in contact with Inland Fisheries Ireland (IFI) on this matter and I wish to advise that the sustainability of our wild Atlantic salmon stocks in Ireland, and indeed throughout its range in the North Atlantic remain under continued threat from a range of pressures in the river, coastal and marine environments. Practically all of these pressures are associated with human activities. Much reduced survival of salmon at sea in recent decades is believed to be a major factor in the current poor state of many of our salmon populations. Survival at sea has declined from 15% to 20% of juveniles returning as adults to Irish rivers in the 1970s and 1980s to a current level of around 5%. This has been attributed to factors such as climate change which has had a negative impact on the natural ecosystems that salmon at sea rely on to survive. There are also coastal pressures affecting salmon, notably the reduced survival of wild salmon from sea lice infestation associated with salmon farming. Within river systems, the principal threats to the sustainability of salmon stocks include water quality issues from agriculture, domestic waste-water treatment and urban waste-water pressures; illegal fishing; hydromorphological pressures relating to physical modification or damage to habitat and natural river/lake processes including migration barriers; climate change stressors; and invasive alien species, heightened predation pressures and disease. Sea trout stocks are also affected by these stressors.

Ireland manages its salmon populations on a catchment-by-catchment basis based on robust conservation focused scientific advice. Ireland's individual river salmon populations are sustainably managed annually based on scientific stock assessments and associated sustainable catch advice provided by the independent Technical Expert Group on Salmon (TEGOS). Ireland's salmon management regime follows international best practice as advised by the North Atlantic Salmon Conservation Organisation (NASCO) and the International Council for the Exploration of the Sea (ICES), and is considered by many as an exemplar conservation focused approach to sustainable wild salmon management. In 2023, 48 of our 144 salmon designated rivers in Ireland are above their conservation limit (i.e. considered to have healthy stocks) and thus have advised sustainable surpluses of fish for harvest, from a national perspective the stock as a whole is below its reproductive capacity with returns of one-sea-winter grilse salmon at 73% and multi-sea-winter salmon at 36% of what they should be to be considered to be in a healthy state. It is envisioned that the conservation focused management system, which is based on annual independent scientific advice will continue to support the conservation of Ireland's individual salmon stocks.

In Ireland, in general, there is increasing focus and a significant body of work ongoing on improving the environment and protecting our native biodiversity, but significant challenges remain to be addressed. In general, we can only really manage factors within our control in the freshwater and coastal environment to improve the status of wild salmon so we need to ensure that the number and quality of wild smolts leaving our rivers is maximised to help boost our stocks overall.

As the competent State Agency for the management, protection and conservation of wild salmon, Inland Fisheries Ireland (IFI), with my support as Minister, is involved in numerous initiatives to improve the status of salmon in Ireland. These include managing the sustainable exploitation of our salmon stocks which provides wide-ranging socio-economic benefits whilst protecting vulnerable individual stocks; nationwide protection operations to reduce illegal fishing; the support for and implementation of habitat rehabilitation measures; and a substantial body of research to better inform the sustainable management and conservation of this iconic fish species.

Protection against illegal fishing is a high priority in Ireland and the State invests a considerable amount of resources on these activities. In 2022, 185,745 fishery staff hours were spent by IFI on protecting Ireland's fishing resource in 2022. This protection work was largely related to Atlantic salmon but fishery patrols were also targeted at other fish species. In 2022, a total of 184 nets were seized measuring a cumulative 8,465 metres in length; 297 Fixed Charge Notices were issued for Fishery Offences; and there were 112 fisheries-related prosecutions (concluded), IFI has recently invested €3.3 million in 12 new state-of-the-art DELTA 780HX RIBs (Rigid Inflatable Boats) for use as fisheries protection and enforcement vessels around Ireland's coastal zone and larger inland lakes. IFI's increased focus on protection of wild Atlantic salmon from illegal fishing during their homeward migration to Ireland and other jurisdictions will continue over the coming years.

Wild salmonids require good water quality maintain healthy stocks. In 2022, the EPA published a water quality monitoring report summarising water quality data in rivers, lakes and estuaries in Ireland over the period 2016-2022 and found that only 54% of surface waters had satisfactory water quality with an overall trend in water quality deterioration. The primary culprit identified is excess phosphorus and nitrogen loading, principally attributed to agricultural run-off. Improvements in water quality in our rivers remains a key concern to address to improve the status of our wild salmon stocks and State bodies in Ireland (including IFI) have and are dedicating substantial resources to address this well-acknowledged on-going challenge as demonstrated by the third cycle of Water Framework Directive River Basin District Plan (<https://www.gov.ie/en/consultation/2bda0-public-consultation-on-the-draft-river-basin-management-plan-for-ireland-2022-2027/>).

Barriers to the natural migration of salmon both for out-migrating smolts and returning adults are a key pressure to the continued sustainability of our salmon stocks. These can impede or delay salmon migrating from the river to sea or travelling upstream to access their spawning grounds, heighten their stress and increase their risk of predation as a consequence. Barriers can also negatively modify the natural river habitat that healthy salmon stocks rely on. There has been an increasing focus on this in IFI under our national barriers programme which is assessing obstacles to migration throughout the country and identifying mitigation measures to improve river connectivity. Between 2010 and 2023, barrier to fish passage remediation works undertaken by IFI in Irish rivers are as follows: works completed = 43; in construction = 2; design stage = 4; and planning stage = 32. There is an extensive Barrier Mitigation programme planned in Ireland over the coming years the details of which are documented in third cycle of Water Framework Directive River Basin District Plan (<https://www.gov.ie/en/consultation/2bda0-public-consultation-on-the-draft-river-basin-management-plan-for-ireland-2022-2027/>).

In 2019, IFI initiated an evidence-based assessment programme to determine the impact of climate change on the Irish fisheries. This programme has established index catchments for fisheries-related climate change research to better inform associated fisheries policies. In late 2020 funding was received from the OPW to examine climate resilience of fisheries in drained catchments. To date the two programmes have initiated a nationwide environmental monitoring network in 12 catchments including two state-of-the-art lake monitoring platforms in regionally important salmonid lakes. There are currently c. 380 environmental sensors collecting data in salmonid river habitat across Ireland, measuring a range of parameters including water temperature, water levels, dissolved oxygen and meteorological data. Spatial statistical models of catchment-wide stream temperatures have been developed to identify channels most at-risk from climate change impacts. Resulting habitat 'risk maps' are informing the development of targeted measures and fisheries policies will be produced at a later stage in this programme of work. Data collected so far has allowed the delineation of cold-water refuges and vulnerable river reaches experiencing excessively warm temperatures in a number of important Atlantic salmon catchments including the Erriff (National Salmonid Index Catchment) and the River Boyne. A climate change vulnerability assessment for Ireland's freshwater fish species has also been published in 2022. Results highlight the high vulnerability of Atlantic salmon to climate change, further emphasising to management the need for climate mitigation solutions in salmon rivers. Related to this, we have warm water

angling protocols in place, which advise stakeholders not to fish when temperatures are elevated. We implemented these in our managed fisheries recently in 2023 during the extended warm drought period.

The effects of marine salmon farming on the continued sustainability of wild salmon and indeed sea trout stocks is a significant issue of concern for IFI and my Department. There is a large body of peer-reviewed international scientific studies, including from IFI scientists, documenting these effects and which is increasingly being used as an evidence base to influence changes to a more sustainable aquaculture industry in Ireland. In particular, there is increased marine mortality on wild salmonids due to sea lice infestation associated with open net salmon farms which can substantially reduce the number of fish that would otherwise return to spawn in the stocks affected. As well as this, the interbreeding of escaped farmed salmon with wild salmon poses a threat to the sustainability of affected wild stocks. It is important to state that I, as Minister and the IFI support the sustainable development of the aquaculture industry in Ireland – the word ‘sustainable’ is key and specifically encompasses sustainability of the development from an ecological as well as financial point of view. The area of particular concern is the need to ensure that any aquaculture development does not have a deleterious effect on other important sectors such as the valuable salmon and sea trout tourist angling sector as well as enabling us to fully comply with our national and international environmental and conservation obligations to protect wild fish. I should note that IFI are also participating in a study to ascertain the level of genetic introgression of escaped farm salmon in wild stocks which is envisaged to commence shortly. In addition to the above, IFI have been involved in numerous research initiatives to ascertain the impacts of aquaculture on wild salmonids. This includes the recent EU-funded LICETrack and ongoing SMOLTrack programmes administered through the North Atlantic Salmon Conservation Organisation.

Pacific pink salmon have been recently acknowledged as a considerable potential threat to our native Atlantic salmon stocks. IFI are actively involved with national and international partners in this area and have commenced a surveillance project for pink salmon in Ireland in 2023. IFI has led the formulation of an expert consortium to develop a standardised surveillance programme across the EU to ultimately inform potential management options to better respond to this emerging threat.

As part of our continued commitment to improving and rehabilitating salmon and sea trout stocks, the Government continues to task IFI with administering the Salmon and Sea Trout Rehabilitation, Conservation and Protection Fund which aims to rehabilitate, protect and conserve salmon and sea trout and their habitats. In this regard, since 2016, in excess of €6 million has been awarded to over 250 projects across the country. In 2023, 24 projects were awarded a total of €999,272 under the scheme with many of these targeted at improving salmonid habitats.

In addition to the above, IFI, with Government support, invest considerable resources in applied research and monitoring to support and inform sustainable fisheries management measures for our Atlantic salmon stocks. This includes a dedicated research facility, the National Salmonid Index Catchment River Erriff, which acts as an index catchment for Ireland where ongoing research activities are focused on salmonid stock assessment, marine survival and migration studies, climate change and hydro-morphological studies, evaluating the impacts of aquaculture, and monitoring disease and invasive species. IFI also have considerable resources invested in national monitoring programmes for salmon including in regard to the annual collection and analyses of angling and commercial catch data; and through nationwide stock monitoring initiatives such as the fish counter, catchment-wide electrofishing and Water Framework Directive programmes. Such programmes underpin our national and international obligations for the provision of scientific information on Atlantic salmon stock status for TEGOS, the North-South Standing Scientific Committee for Inland Fisheries, IFI, the Department of Environment, Climate and Communications and in regard to EU Habitats Directive reporting and international stock assessments and associated reporting for ICES, the EU and NASCO.

Ireland under the auspices of the EU is an active participant in NASCO, the inter-Governmental body whose principal objective is to conserve, restore, enhance and rationally manage Atlantic salmon through international co-operation taking account the best available scientific information. Indeed, Irish delegates, notably from IFI and my Department, have actively participated in NASCO activities and initiatives since its

foundation and in particular have assumed an increasingly prominent role in the EU delegation to NASCO, and indeed in general, since Brexit. This includes providing EU representatives for NASCO on various review, policy, fisheries management, administrative and salmon conservation groups, coordination and input into EU policy positions, highlighting issues of concern to our salmon stocks and input into NASCO initiatives to address these. As part of this, Ireland has a five-year national Implementation Plan in place to demonstrate what actions are being taken to implement NASCO's Resolutions, Agreements and Guidelines and we submit Annual Progress Reports on this which are independently reviewed to evaluate our progress. We also have active participation in the Gyrodactylus salaris working group and the recently formed pink salmon working group. In general, my Department and IFI maintain extensive networks both nationally and internationally with scientists, fisheries managers and other stakeholders in the angling sector in numerous fora to better understand and inform measures to address issues of common concern. These activities ultimately endeavor to better address the threats and pressures facing Atlantic salmon and to promote the ongoing and future sustainability of this iconic, conservationally and socio-economically important species.

Yours Sincerely

Anthony O'Grady

Private Secretary to Minister for Communications, Climate Action and Environment, Eamon Ryan T.D