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Dear Chairman

Thank you for your letter dated 3 June 2019 to the Minister for the Environment, in relation to the Sea Fisheries (Minimum Size Limits)(Amendment No.7)(Jersey) Regulations 201-, and your Scrutiny Panel comments and recommendations.

As the Minister has delegated political responsibility for Marine Resources and Fisheries matters to me, and I have led this project to date, he has asked that I respond to your letter on his behalf.

I set out below my response to your comments, in particular the two recommendations.

Recommendation one: *The Panel recommends that the Department for Growth, Housing and Environment investigates other possible measures that could be taken, such as further protection of known breeding sites, by Q3 2019.*

Background:
The Marine Resources team have been studying the local and regional Brown Crab situation in collaboration with the Institut Français de Recherche pour l'Exploitation de la Mer (IFREMer), the Bay of Granville Crustacean Working Group and members of the International Council for the Exploration of the Sea (ICES) Working Group on the Biology and Life History of Crabs (WGCRAB). They have investigated the scale, distribution, population dynamics and possible causes of the recent decline in Brown Crab and have initiated additional research projects. The international study of Brown Crab biology and behaviour suggests that they do not migrate to or aggregate at particular locations in order to mate or spawn. The post planktonic lifecycle of a local Brown Crab will begin on the seashore, and after around three years, it will move offshore and begin a migration westwards into deeper water. At some point the Brown Crabs will mate and, after several months, the females will find a suitable spawning site often many, many kilometres away from where they mated. Tagged and other studies carried out over decades suggest that they do not seek defined spawning areas and show no location fidelity when spawning or mating.

Individual crabs may walk for tens or hundreds of kilometres during their life time and, in Jersey's case, this means that we are on the edge of a 'Brown Crab conveyor belt'. Larvae from the

English Channel settle on our seashore, grow and then migrate out of our waters to breed in deeper water areas so that the larvae can be carried back to our area on prevailing currents. The Marine Resources team believe that several years ago there was a spawning crisis in the English Channel which meant that the conveyor belt stopped working. This helps explain why the local industry was so badly hit compared with neighbouring, deeper water, areas which are closer to the start of the conveyor belt and where there is a greater supply of larger individuals.

Response to recommendation one:

International studies in the English Channel and elsewhere suggest that breeding sites are not a feature of the Brown Crab's lifecycle and the GoJ Marine Resources team has not been provided with evidence to suggest that local waters are an exception to this. Since 2004 Marine Resources have undertaken original research into local Brown Crab populations and, since 2017, have been working closely with expert bodies to measure the current crisis and to establish a cause. A full range of management measures has already been investigated and their possible economic and stock effect on the local commercial fleet have been modelled.

Any fishing gear measures relating to Brown Crab must be modelled against the local Lobster and Spider Crab fisheries, as these animals are caught in the same pots and, in the case of Lobster, are economically more important than Brown Crab. The increase in Minimum Landing Size (MLS) is specific to the Brown Crab and can be implemented without affecting other stocks. In addition, the commercial fishery requested, and is now subject to, a ban on the landing of soft (new) shelled crab that has in the past been taken for bait in whelk pots. Further measures relating to fishing gear and practices in relation to Brown Crab and Lobster have been economically modelled and are currently subject to discussion between Marine Resources and fisheries stakeholders, including the Jersey Fishermen's Association.

Recommendation two: *The Panel recommends that further investigation is required as to the effects of dredging on breeding sites and that any outcome(s) of this investigation are reported back to the Panel by Q3 2019.*

Background:

As set out above, Brown Crabs do not utilise breeding sites. While dredging the seabed can be damaging to some marine habitats and to the animals and plants that dwell there, the closure of any area to a commercial fishery must be based on robust evidence and a demonstrable need. The closure of sites outside of Jersey's three mile area would be subject to discussion with Normandy and Brittany through the framework of the Bay of Granville Agreement. Marine Resources (in conjunction with local Non-Government Organisations (NGOs)) have spent nearly a decade surveying the local seabed in order to identify and map those habitats that are most likely to be affected by mobile fishing gear, principally dredging and trawling. As a consequence the use of all mobile gear has been prohibited around much of Jersey's inshore coast and around Les Écréhous and Les Minquiers (an area of around 150 km2 or 6% of Jersey waters). These areas were closed off because they contain sensitive marine habitats (such as seagrass and maerl) and earlier this year they were accepted as being international Marine Protected Areas by the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR). This research is ongoing within the Marine Resources team (and local NGOs). A local PhD student, studying the biological and socio-economic effects of various fishing practice on seabed habitats, is currently working within the Marine Resources team. Their work includes researching the effects of dredging on key commercial species such as lobsters, crabs and scallops.

Response to recommendation two:

Determining the effects of dredging on particular habitats and species is a complex undertaking. It requires systematic, repeated sampling and surveying over several years on both dredged and non-dredged sites. This work is both expensive and time consuming. Following the creation of Jersey Marine Protection Areas (MPAs) at Les Écréhous and Les Minquiers, the Marine Resources team (in conjunction with local NGOs) proposed the initiation of a PhD study. This study would look at the ecological, biological and socio-economic effects of all fishing activities and all commercial species inside and outside the MPA areas over a three year period. In 2018 this PhD received full funding from the BLUE Marine Foundation, a charity dedicated to creating marine reserves and establishing sustainable models of fishing, and a local graduate student has just entered the second year of her study. The Marine Resources team are providing supervision and logistical assistance with this study. The results from the PhD study will be combined with other ongoing research to inform a discussion around the spatial management of fisheries and other maritime activities in Jersey waters.

Should you have any questions relating to the above information and responses please let me know. The Marine Resources team will also be pleased to meet with you and/or provide more information to you or the Scrutiny panel.

Yours sincerely

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