International Ocean Noise Coalition Statement

28th Session of the FAO Committee on Fisheries
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***Agenda Item 11*: FAO'S PROGRAMME OF WORK IN FISHERIES AND AQUACULTURE**

We are representatives of a coalition of non governmental organizations (NGOs) and we speak on the behalf of a partnership of more than 150 NGOs who are concerned about the impacts of anthropogenic (human-made) underwater noise (acoustic pollution) on marine biodiversity. We are pleased to address this session of the FAO Committee on Fisheries about the growing international problem of underwater noise pollution. Human produced underwater noise poses significant threats to the conservation of marine biodiversity in general and, as far as this forum is concerned, to the conservation of fish species.

The introduction of anthropogenic underwater noise into marine ecosystems and its harmful effects on marine biodiversity, have increasingly drawn the attention of the international community in recent years. This is demonstrated, *inter alia*, by the adoption of several United Nations General Assembly resolutions on "Oceans and the Law of the Sea" which call upon Member States to submit peer reviewed studies to the Division for Oceans and the Law of the Sea of the United Nations Secretary General (DOALOS). A review of the submitted studies to date, and of other studies on the topic, confirm that anthropogenic underwater noise:

- is a source of pollution that can travel long distances and blanket very large areas,
- can cause temporary or permanent hearing loss in fish, interfere with fish communication, schooling and possibly migration, cause hormonal stress responses and produce dramatically reduced fish catch rates
- is reported to have an impact on at least 55 marine species, including the following twenty commercially valuable species of fish: pink snapper, goldfish, cod, haddock, rockfish, herring, sand eel, blue whiting, catfish, thicklip mullet, horse mackerel, bluefin tuna, fathead minnow, toadfish, carp, gudgeon, perch, silver bream, trumpeter and trevally (Weilgart 2008).

Last year, at the meeting of the United Nations Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, we underlined the scientific evidence indicating that this form of pollution can cause mass strandings of marine mammals, deafen fish and interfere with fish communication, schooling and possibly the selection of suitable habitat. The continuum of potential effects of anthropogenic underwater noise on fish includes immediate death, temporary or permanent deafness, avoidance behaviour and other behavioural effects resulting from fish not being able to hear biologically important environmental sounds from predators or communications from conspecifics (Popper et alt 2005).

There is an extensive array of anthropogenic sources of noise in marine ecosystems. The primary sources of intense noise are shipping, air guns used for oil and gas exploration and high intensity military sonars. The scientifically documented effects of these three noise sources have received considerable attention in various international fora and minimally warrant a precautionary approach in their management. Particularly in the case of high intensity sonar, reliable scientific evidence indicates that one brief exposure to moderate levels of mid-frequency sonar can cause marine mammals to strand and die (Fernandez et alt 2005).

Shipping and seismic airguns have significant effects on various species of fish. We know that local noise generated by shipping produces behavioural deviations in bluefin tuna schools, affecting the accuracy of their migration to spawning and feeding grounds which could have significant effects on their fitness (Sarà, 2007). Studies show that the underwater noise generated by airguns dramatically reduces fish catch rates by 40 to 80% for cod, haddock, rockfish, herring, sand eel and blue whiting. The use of air guns in the area severely affects fish distribution, local abundance and trawl and longline catch rates (by mass). In one study, fishing catch rates did not return to normal levels for the five days monitored after the seismic shooting ended (Engas et alt 1996, Slotte et alt 2004).

The full scale of the problem is difficult to determine. This is unfortunate since those fish species that are known to be affected by anthropogenic underwater noise – including bluefin tuna, cod, haddock, carp, *inter alia* – are an important economic resource. This is demonstrated by the efforts being made to ensure their conservation and sustainable use by States through the FAO and RFMOs. Nonetheless, no studies on the impacts of anthropogenic underwater noise on the fitness of fish species - and in particular on fish catch rates - have been conducted by the FAO.

We regard the technical expertise of the FAO, and its Fisheries and Aquaculture Department in particular, as indispensable in conducting such studies and evaluating the socioeconomic impacts of anthropogenic underwater noise on fish catch rates. This would be particularly relevant in the context of the formally adopted ecosystem approach to fisheries (EAF) - and programmes and activities related to it - as undertaken by the FAO Fisheries and Aquaculture Department. The EAF is a tool that contributes to the conservation of marine ecosystems and fishery resources. It considers the impacts of fishing and other human activities on marine ecosystems. The evidence indicates that anthropogenic underwater noise can have significant impacts on these ecosystems.

The FAO Fisheries and Aquaculture Department has a general obligation to ensure the effective conservation and management of fisheries resources and the productivity of marine ecosystems, supporting these resources in a manner which is consistent with the FAO Code of Conduct for Responsible Fisheries. The FAO Fisheries and Aquaculture Department is also committed to responding to emerging challenges, including environmental threats and concerns affecting fisheries, by developing new instruments such as plans of actions and technical guidelines. Such responses would be appropriate and timely with respect to an emerging challenge like anthropogenic underwater noise.

To this end, we urge the FAO Fisheries and Aquaculture Department to rely on its internal services to tackle this emerging challenge. The International Institutions and Liaison Service (FIEL) of the FAO Fisheries and Aquaculture Department for instance has, *inter alia*, the primary responsibility for ensuring liaison and coordination with FAO members, the UN and its specialized Agencies and other international intergovernmental and non governmental organizations concerned with capture fisheries and aquaculture, including RFMOs. It should

therefore be in a position to evaluate the progress that has been achieved by the international community in dealing with anthropogenic underwater noise and either collect data and information or recommend that data and information be collected. The Fishing Technology Service (FIIT) of the FAO Fisheries and Aquaculture Department on the other hand has, *inter alia*, primary responsibility to develop, through codes of conduct, standard specifications and guidelines in support of fisheries management and the protection of the environment. It should therefore be uniquely positioned to provide guidance to the international community on socioeconomic impacts of anthropogenic underwater noise on fishing catch rates based on available data and information.

While we understand the importance of the current activities of the Fisheries and Aquaculture Department, we strongly recommend that the FAO give due consideration in its future work programme to this issue which has been overlooked thus far and that needs to be studied for the benefit of marine fisheries and the fishing industry. We would therefore expect the FAO to include in its bi-annual SOFIA report, a statement on progress made on reducing the impact of ocean noise on world fish stocks. Since ensuring the conservation of fish species is only one of the numerous problems related to the impacts of anthropogenic underwater noise on marine biodiversity - other international fora including the UN, IMO, ACCOMBAMS, ASCOBAMS, IWC and the Bonn Convention -have been working on other aspects of this broad topic - we encourage the FAO to enter into partnerships and cooperative relationships with other governmental organizations and non governmental organizations while addressing anthropogenic underwater pollution.

Bearing in mind that one of the main functions of COFI is to conduct periodic general reviews of fishery problems of an international character and to appraise such problems and their possible solutions with a view to concerted action by States, the FAO, inter-governmental bodies and the civil society, we strongly believe that the time has come for the FAO, in its capacity as the only existing body with a global programme and outreach in fisheries, to also participate in efforts to counter the harmful effects of anthropogenic underwater noise with respect to its area of competence, namely the conservation and sustainable use of fisheries.

We thank COFI for the attention and look forward to liaising further with the FAO in the future.

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Peer reviewed scientific studies submitted to DOALOS pursuant to paragraph 107 of UNGA Resolution 61/222 are available at the following URL:
http://www.un.org/depts/los/general_assembly/noise/noise.htm