

## TERMS OF REFERENCE FOR ECOCARD INTERSESSIONAL WORK

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### SUMMARY

*We recommend that a sub-group is formed to work and discuss intersessionally on the applicability and functionality of the Ecosystem Report Card (EcoCard) as a tool for monitoring the impacts of ICCAT fisheries and contribute to the progress of implementing Ecosystem-Based Fisheries Management (EBFM) in ICCAT. To do so, the sub-group will be tasked to (1) review data availability and ICCAT management framework to inform the development of EcoCard, (2) summarize in a guideline document the history and current state of the EcoCard developments in ICCAT, (3) seek feedback and synergies with other relevant work and processes across all species groups and sub-committees of the SCRS, and (4) make recommendations for improvements to make the EcoCard more functional and adaptable to end-user needs. A more functional EcoCard has the potential to (a) communicate more effectively the use of this tool to the wider ICCAT community including its main objective and purpose, (b) attract more research and participation for its development and create more synergies of the work across all species groups and sub-committees of the SCRS, and (c) identify research priorities as well as relevant gaps which will allow management planning and identification of priorities by the ICCAT Commission.*

### RÉSUMÉ

*Nous recommandons la création d'un sous-groupe chargé de travailler et de discuter, entre les sessions, de l'applicabilité et de la fonctionnalité de la fiche informative sur les écosystèmes (EcoCard) en tant qu'outil de suivi des impacts des pêcheries de l'ICCAT et de contribuer aux progrès de la mise en œuvre de la gestion des pêcheries basée sur l'écosystème (EBFM) au sein de l'ICCAT. Pour ce faire, le sous-groupe sera chargé (1) d'examiner la disponibilité des données et le cadre de gestion de l'ICCAT afin de renseigner le développement de l'EcoCard, (2) de résumer dans un document d'orientation l'historique et l'état actuel des développements de l'EcoCard au sein de l'ICCAT, (3) de rechercher un retour d'information et des synergies avec d'autres travaux et processus pertinents dans tous les groupes d'espèces et sous-comités du SCRS, et (4) de faire des recommandations d'améliorations pour rendre l'EcoCard plus fonctionnelle et adaptable aux besoins des utilisateurs finaux. Une EcoCard plus fonctionnelle a le potentiel de (a) communiquer plus efficacement l'utilisation de cet outil à l'ensemble de la communauté de l'ICCAT, y compris son objectif et son but principaux, (b) attirer davantage de recherche et de participation pour son développement et créer davantage de synergies de travail entre tous les groupes d'espèces et les sous-comités du SCRS, et (c) identifier les priorités de recherche ainsi que les lacunes pertinentes qui permettront la planification de la gestion et l'identification des priorités par la Commission de l'ICCAT.*

### RESUMEN

*Recomendamos que se forme un subgrupo para trabajar y discutir en el periodo intersesiones la aplicabilidad y funcionalidad de la ficha informativa sobre ecosistemas (EcoCard) como herramienta para hacer un seguimiento del impacto de las pesquerías de ICCAT y contribuir al*

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*progreso de la implementación de la Ordenación pesquera basada en el ecosistema (EBFM) en ICCAT. Para hacerlo, el subgrupo se encargará de: (1) revisar la disponibilidad de datos y el marco de ordenación de ICCAT para aportar información al desarrollo de la EcoCard, (2) resumir en unas directrices la historia y el estado actual del desarrollo de la EcoCard en ICCAT, (3) buscar retroalimentación y sinergias con otros trabajos y procesos pertinentes en todos los grupos de especies y subcomités del SCRS y (4) hacer recomendaciones para mejorar la EcoCard y hacerla más funcional y adaptable a las necesidades del usuario final. Una EcoCard más funcional tiene el potencial de (a) comunicar de forma más eficaz el uso de esta herramienta a la comunidad de ICCAT, incluidos su principal objetivo y propósito, (b) atraer más investigaciones y participación para su desarrollo y crear más sinergias del trabajo en todos los grupos de especies y subcomités del SCRS y (c) identificar prioridades de investigación, así como lagunas importantes que permitirán planificar la ordenación y la identificación de prioridades por parte de la Comisión.*

#### KEYWORDS

*EcoCard tool, monitoring, pressures, state, indicators, thresholds, EBFM*

## 1. Background

ICCAT has committed to apply Ecosystem-Based Fisheries Management (EBFM) in accordance with internationally agreed standards. Implementing this approach requires to use ecosystem information to provide context for single species management advice and considering the direct and indirect interactions between fisheries and climate, non-target species and ecosystem processes to provide more integrated fisheries management advice (FAO 2003).

Since EBFM started to be implemented around the world, multiple tools, varying in complexity and with different degrees of data requirements and resources, have been developed and are being tested to better link ecosystem information and science into fisheries management. The tools being developed include ecosystem risk assessments, ecosystem status assessments, indicator-based ecosystem report cards, ecosystem models, management strategy evaluation and the formalization of ecosystem fishery plans, among others (Levin et al. 2009, Fletcher et al. 2010, Link 2010, Zador et al. 2016). These tools are being used to formulate more integrated scientific advice to managers and policy-makers that can range from being more strategic (broad-scale) to tactical (directed at specific management decisions) (Plagányi et al. 2012).

Since 2017 the SC-ECO is working on developing an indicator-based Ecosystem Report Card (EcoCard). The EcoCard aims to be used as a tool for reporting the direct and indirect impacts of ICCAT fisheries (and the environment) on the state of several components of the ecosystem to the Commission (ICCAT 2017). The development of the EcoCard requires a long-term strategy to build ecosystem knowledge, dedicated research and resources for its development as well as clear direction from the Commission on priorities for better ecosystem strategic planning.

As a first step, the SC- ECO defined broad operational components to be monitored in the EcoCard. These include: retained species; non-retained species including seabirds, marine turtles, marine mammals and sharks; food-webs/trophic relationships; habitats; socio economic; fishing pressure; and environmental pressure. In 2020, there was a proposal to add the marine debris pressure component to the EcoCard.

There are groups of experts (“EcoCard groups”) working on the development of indicators-based assessments for each of the EcoCard components. Based on these indicator-based assessments, which are presented and revised by the SC-ECO every year, a pilot EcoCard is then produced to be presented to the SCRS. The SC-ECO updates and review the pilot EcoCard annually based on the understanding that multiple iterations are needed to develop a more scientifically mature based product.

Since 2017, the different EcoCard groups have worked on their respective ecosystem components at different speeds, addressing their respective objectives, revising potential data sources, proposing candidate indicators, and in some cases, have presented indicators to the SC-ECO for adoption. Consequently, the indicator-based assessments for each ecosystem component are at different stages of development, from the initial stage of proposing a candidate list of indicators that could potentially be used to monitor that particular ecosystem component, to the stage of presenting the indicators for formal adoption by the SC-ECO.

As the EcoCard groups have advanced their work, concern has been expressed that the scope of some ecosystem components has not been clearly defined, and that the scope of some components might be overlapping with the scope and work of others, creating some potential confusion on how to proceed forward. Furthermore, it has been expressed that indicators used in monitoring, evaluation and reporting systems related to the ecosystem report card should be developed in an economical, efficient and effective manner, which requires screening and validation. These concerns are the stimulus for what will likely be an iterative process that constantly attempts to keep the reporting of ecosystem scale fisheries impacts relevant to the needs of ICCAT and the SCRS working groups.

## **2. Terms of Reference**

We recommend that a sub-group is formed to work and discuss intersessionally on the applicability and functionality of the Ecosystem Report Card (EcoCard) as a tool for monitoring the impacts of ICCAT fisheries and contribute to the progress on the implementation of EBFM framework in ICCAT as requested by SCRS strategic research plan and ICCAT Commission mandate. To do so, the sub-group will consider ICCAT existing management system and boundaries and evaluate current monitoring and stock assessment framework

The following terms of reference will be addressed:

**TOR 1.** Create a *guideline document* which reviews the components of ICCAT's EcoCard and summarizes the development and current state of ICCAT's EcoCard. This baseline document may include

- (i) The main scope and objectives for each of the EcoCard component.
- (ii) The data requirements to evaluate them considering ICCAT data requirements.
- (iii) The attributes the EcoCard components are meant to monitor as well as a list of candidate indicators.
- (iv) A proposal for possible thresholds of the candidate indicators that would trigger management actions (e.g. SCRS recommendation to management actions), applicable throughout the different EcoCard components.
- (v) The connections and synergies among the EcoCard components will be reviewed and described.

**TOR 2.** Identify successes and lessons learned since its creation as well as identify emerging concerns and inefficiencies, including the gaps, weaknesses, and strength in the monitoring framework for the estimation of the indicators of different components as well as develop a proposal to improve monitoring systems required.

**TOR 3.** Seek feedback and synergies with other relevant work and processes across all species groups and sub-committees of the SCRS to make the EcoCard more functional and adaptable to end-use needs. This will include (1) identifying the ongoing relevant research in the SCRS and connect it to the EcoCard development, (2) considering the role of the ongoing work on case studies (Sargasso Sea case study and Tropical Region case study), (3) considering the ongoing work on risk assessment approaches to prioritize work, and (4) identify opportunities and collaborations with other organizations that can bring new expertise and resources.

**TOR 4.** Provide recommendations for improvements to make the EcoCard more functional and adaptable to end-user needs and propose mechanisms for regular revision by the SCRS and feedback from the Commission to advance towards EBFM implementation in ICCAT.

## **3. Logistics and participants**

The sub-group will work intersessionally and present their outcomes at the 2022 annual SC-ECO meeting for review, discussion and possible adoption of recommendations. All SC-ECO participants are invited to participate in this intersessional work. During the SC-ECO meeting it will be discussed who is responsible for convening the sub-group and how the call is made to bring all interested participants to participate.

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