

| PROPORTION OF FISH STOCKS WITHIN THEIR SAFE BIOLOGICAL LIMITS |           |                |
|---|-----------|----------------|
| Oceans, Seas and Coasts                                       | Fisheries | Core indicator |

### 1. INDICATOR

- (a) **Name:** Proportion of fish stocks within their safe biological limits
- (b) **Brief definition:** Percentage of fish stocks exploited within their level of maximum biological productivity
- (c) **Unit of Measurement:** %
- (d) **Placement in the CSD Indicator Set:** Ocean, Seas and Coasts/Fisheries.

### 2. POLICY RELEVANCE

- (a) **Purpose:** To provide information on the state of exploitation of fishery resources at the global, regional and national levels.
- (b) **Relevance to Sustainable/Unsustainable Development** (theme/subtheme) : This indicator will provide an important reference for policy making related to sustainable management of fish stocks at the national level, regionally (e.g. regional fisheries bodies and LMEs) and at the global level (COFI and other relevant international bodies such as the CBD).
- (c) **International Conventions and Agreements:** The Food and Agriculture Organization of the United Nations (FAO) Code of Conduct for Responsible Fisheries and the UN Fish Stock Agreement.
- (d) **International Targets/Recommended Standards:** With the aim of maximizing sustainable production from capture fisheries, and therefore contributing to increased food security, the target for this indicator should be a value close to 100% fish stocks exploited within their safe biological limits.

The indicator is included in the revised MDG monitoring framework, presented in 2007 to the General Assembly, to monitor the Millennium Development Goal Nr. 7 (Ensure environmental sustainability) and the associated targets “Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources” and “Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss”.

- (e) **Linkages to other indicators:** This indicator is related to “Annual catch by major species”.

### 3. METHODOLOGICAL DESCRIPTION

(a) **Underlying definitions and concepts:** The indicator will be based on formal national stock assessments that relate catches to the fishing effort deployed. The usefulness of this indicator should be seen in the context of monitoring trends at the national, regional and global levels, by international institutions. The indicator will be less useful for fisheries management at the national level, where a set of more specific indicators will be needed.

(b) **Measurement method:** The indicator will be based on formal stock assessments to assess the exploitation state of the world's main resources. Classification will follow FAO/FIRM's procedure to classify the state of the stocks (based on descriptors such as Underexploited, Moderately exploited, Fully exploited, Overexploited, Depleted and Recovering). This classification will allow calculation of the " % stocks within safe biological limits" indicator.

(c) **Limitations of the Indicator:** While fishing effort is a major variable influencing population abundance, it is widely recognized that other factors, such as environmental fluctuations and climatic change, predator-prey interactions and habitat modification may also play an important role.

(d) **Status of the Methodology:** This methodology is already used by FAO for describing status and trends in capture fisheries in the biannual publication SOFIA and for regular reviews of the state of the world marine fisheries .

(e) **Alternative definitions/Indicators:**

#### 4. ASSESSMENT OF DATA

(a) **Data needed to Compile the Indicator:** Time series of catch and effort data for each exploited stock, including at least 10 years of data points

(b) **National and International Data Availability and Sources:** Countries usually collect catch and effort statistics as part of their monitoring responsibility. As regards shared stocks, usually regional fisheries bodies, through their scientific committees, collate data on shared resources to synoptically cover each stock.

(c) **Data References:** International and regional data is included in the bi-annual FAO publication "State of World Fisheries and Agriculture (SOFIA)"

#### 5. AGENCIES INVOLVED IN THE DEVELOPMENT OF THE INDICATOR

(a) **Lead Agency:** The Food and Agriculture Organization of the United Nations (FAO)

(b) **Other Contributing Organizations:** Not available

#### 6. REFERENCES

**(a) Readings:**

Garcia, S., DeLeiva, I. and Grainger, R. (2005). Global trends in the State of Marine Fisheries Resources 1974-2004. In: FAO. Review of the State of World Marine Fishery Resources. FAO Fisheries Technical Paper. No. 457. pp 10-14.

**(b) Internet Sites:**

<http://www.fao.org/fi/default.asp>