

Contribution to the report of the Secretary General on oceans and the law of the sea

Oceans and the law of the sea: data collection and standardization of data and assessment

Data for oceans and seas are collected by direct observations and monitoring as well as remote sensing that can measure surface properties. Largely independent observing systems have evolved to meet the needs of particular disciplines but they were developed to some degree in isolation from other domain of statistics. This lack of cohesion leads to differences in concepts, definitions, data collection and processing practices and causes significant challenges and limitations in the production of aggregated, integrated coherent statistics and indicators for oceans and seas.

This situation is mostly the result of the lack of an international agreed framework to measure oceans and seas. The System of Environmental-Economic Accounting (SEEA) Central Framework, adopted as international statistical standard by the United Nations Statistical Commission in 2012, and the SEEA Experimental Ecosystem Accounting, welcomed by the Statistical Commission as “an important first step in the development of a statistical framework for ecosystem accounting”, provide an important statistical framework to monitor the condition and capacity of the oceans as well as the ecosystem services provided and the impact of human activities on the oceans and seas. The SEEA Central Framework provides a statistical standard for measuring the environment and its relationship with the economy. It uses an accounting approach to the measurement of oceans and seas, in particular looking at stocks and changes in stocks in relation to the economy and human activities and their impacts. By way of examples, the SEEA Central Framework covers measures of fish stocks and changes therein, due to extraction or other causes (e.g. changes in the ocean ecosystems) as well as the economic information related to fisheries including the contribution of the fisheries and associated industries to GDP, the contribution of fisheries to national wealth and the depletion of fishery resources. It also covers impacts of economic activities on coastal areas due for example to emissions discharged into the oceans and seas. The SEEA Experimental Ecosystem Accounting provides a statistical framework to measure marine and coastal ecosystems. It allows to measure for example the extent and condition of coral reefs and mangroves, and the flows of services from these ecosystems that benefit economic and other human activity; for example provisioning of marine plants, algae and crustaceans for human consumption, prevention of coastal erosion and flooding by coral reefs and the provision of seascape character for tourism, in a comparable way across countries and over time. It also allows for the measurement of degradation of oceans and seas and its economic impacts.

The SEEA Central Framework and Experimental Ecosystem Accounting have the potential to mainstream oceans and seas into the national accounts. While the SEEA conceptual framework can easily be applied to oceans and seas, more work is needed to develop methods and agreed classifications that apply to oceans and seas. Effort should be made to mainstream the compilation of ocean and sea statistics into a regular statistical and policy programme through the development of an integrated statistics programme at a country level to ensure sustainable production and harmonization of statistics and indicators for oceans and seas.