0.a. Goal

14 CONSERVATION AND SUSTAINABLE USE OF OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

0.b. Target

14.3 Minimizing and addressing the impacts of ocean acidification, including by strengthening scientific cooperation at all levels

0.c. Indicator

14.3.1 Average marine acidification (pH) measured at a predetermined location out of a total of determined samples

0.d. Series

Average marine acidification (pH) measured at a predetermined location out of a total of determined samples

0.e. Metadata update

10/19/2020

0.f. Related indicators

No Indicator related to0679c9a6a6d43z0

1.a. Organisation

Ministry of the Sea, Inland Waters and Fisheries

1.b. Contact person(s)

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1.c. Contact organisation unit

Studies, Planning and Infrastructure Directorate

1.d. Contact person function

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2.a. Definition and concepts

Definition: Ocean acidification is the reduction in the pH of the ocean over a prolonged period, typically decades or more, caused mainly by the absorption of carbon dioxide from the atmosphere.

Concept: Ocean acidification is caused by an increase in the amount of CO_2 atmospheric dissolved in sea water. The average marine acidity, the concentration of hydrogen ions on a logarithmic scale, is expressed in pH. In order to restrict the carbonate chemistry of seawater, it is necessary to measure at least two of the four parameters, ie pH, pCO_2, DIC (CT) and TA (AT). pH (the concentration of hydrogen ions on a logarithmic scale, expressed in full scale), DIC (total dissolved inorganic carbon, in µmol kg-1), pCO_2 (partial pressure of carbon dioxide, in ppt or µatm) and TA (TA, total alkalinity, in µmol kg-1).

2.b. Unit of measure

pH

3.a. Data sources

Ministry of the Sea, Inland Waters and Fisheries (National Institute for Fisheries Research)

3.b. Data collection method

pH data collected in situ during oceanographic expeditions in the Mozambique Channel using electronic CTD type probes equipped with pH sensors.

3.c. Data collection calendar

February 2021

3.d. Data release calendar

III Quarter of 2021

3.e. Data providers

National Institute for Fisheries Research

3.f. Data compilers

Ministry of the Sea, Inland Waters and Fisheries

3.g. Institutional mandate

Joint Dispatch, of 4 December 2003, Boletim da República nº 16, of 21 April 2004 The National Statistics Institute, through the Minister of Protection, delegates powers to the National Directorate of Fisheries Economics of the Ministry of Fisheries, for the notation and collection of statistical data for all statistics in the sector, by taking advantage of administrative acts and inquiries.

4.a. Rationale

Part of the CO2, emitted into the atmosphere as a result of natural and anthropogenic processes, is absorbed by the oceans, changing its chemical composition and progressively acidifying the ocean. Acidification results in a decrease in pH and the observed decrease in the pH of seawater has been shown to affect a variety of organisms and ecosystems, biodiversity and food security.

4.b. Comment and limitations

The current current infrastructure and logistics conditions only allow pH measurement

4.c. Method of computation

The pH is determined as the average of the observations obtained at the oceanographic exposure stations

4.d. Validation

The processed information is screened and analyzed at a technical level where it is then submitted to the Institution's Technical Council for pre-approval, where after verifying the information it healthily goes to the Advisory Council for approval of the data or information produced at a later time dissemination

4.h. Methods and guidance available to countries for the compilation of the data at the national level

To determine the acidity level of the Ocean, expeditions are made from the Mozambique channel of the ocean using the PH calculation.

Data existing throughout the continental shelf of the Mozambique channel, although not uniformly, as some regions had more coverage than others in terms of the number of scientific expeditions carried out

4.i. Quality management

The processed information is screened and analyzed at a technical level where in turn it is submitted to the Institution's Technical Council. These strata are composed of qualified scientists for the purpose of verification and validation.

4.j. Quality assurance

The data collected and analyzed, results of the expeditions made at the technical level are in turn submitted to members of the Technical Council composed of specialists in the area of acidification of the oceans for analysis and comparability with the different results of the expeditions with the countries of the region and or worldwide, in order to ensure the sustainable management of marine ecosystems on the pH of the ocean.

4.k. Quality assessment

The instruments for assessing the quality of statistical processes and products at the level of the National Statistical System are being developed based on the 19 quality principles established by the United Nations Statistics Commission.

5. Data availability and disaggregation

Data availability is annual and they are not broken down.

6. Comparability/deviation from international standards

Main differences lie in the fact that national data are based on the measurement of only one species (pH) of the carbon complex of the four recommended and the average is calculated from non-fixed stations.