

Oceans and the law of the sea
Report of the Secretary -General

Part I

“Oceans and sustainable development: integration of the three dimensions of sustainable development, namely, environmental, social and economic”

Contribution by the World Meteorological Organization
6 February 2015

Executive summary

1. WMO and its 191 Members, whose National Meteorological and Hydrological Services and other competent institutes address multidisciplinary ocean-related issues in cooperation with other specialized agencies of the United Nations. WMO contribution falls primarily in the domains of climate and ocean observations, including related data processing and telecommunication infrastructure; research on atmosphere-ocean-land interactions, with particular regard to the climate system; services for disaster risk reduction, including from marine hazards; and development of technical standards and information documents for policymakers and the public at large. WMO programmes and projects address global societal needs directly related to sustainable development, for: improved protection of life and property; poverty eradication, sustainable livelihoods, food security, sustainable access to water and energy, and economic growth;

I. Scope of WMO activities related to oceans

2. The World Meteorological Organization (WMO)¹ is the United Nations system's authoritative voice on the state and behaviour of the Earth's atmosphere, its interaction with the oceans, the climate it produces and the resulting distribution of water resources.

3. WMO is the expression and represents the interests of its 191 Members (185 States and 6 Territories), which National Meteorological and Hydrological Services and other competent institutes

Atomic Energy Agency (IAEA), the 2013 edition of the Bulletin has included an insert on

related ocean and coastal issues. A GFCS-SIDS initiative has been launched to address the

and soil condition, the temperature and chemical balance of our oceans, and pollutants in our air, water, soil and oceans. Subtle changes in these parameters can have profound consequences for ecosystems, biodiversity and our food production systems.

6. Among other activities, services for the reduction of risks of disasters from coastal and marine hazards represent important examples for the integration of the different pillars of sustainable development. Natural disasters are recognized as a critical impediment to social and economic development and poverty eradication.²⁴ Coastal flooding, including from storm surges, wind-driven waves and tsunamis, is among the most significant natural hazards, affecting several million people globally each year, especially in Small Island Developing States and many coastal regions of developing countries. For the concentration of people and economic activities, port cities exposed to coastal flooding are particularly vulnerable, while the presence of a significant part of global population in river deltas exposes it to a combination of river and coastal flooding. It is expected that the risk from coastal flooding will increase in the future due to a combination of factors: rise in sea levels coupled with the likely increase in frequency and intensity of tropical storms due to climate change; increase of population and value of material assets in vulnerable coastal zones. Overall, it is estimated that economic losses due to weather, climate, and geophysical-related disasters, including coastal flooding, are higher in developed countries, while fatality rates and economic losses as a proportion of gross domestic product are higher in developing countries, thus clearly marking the inter-linkage between natural disasters, climate change and the development agenda.

7. As a practical example of this approach, through the Coastal Inundation Forecasting Demonstration Project (CIFDP) ²⁵ WMO aims to improve the safety of coastal communities and support their sustainable development by enhancing coastal inundation forecasting and warning systems that are embedded in national disaster management. The project focuses on strengthening capabilities for operational monitoring and forecasts/warnings on coastal inundation from combined extreme events, such as extreme sea level rise (e.g. large waves, storm surges, high tide), fluvial flooding and tropical cyclones, and furthermore, for decision support system for emergency management. Benefits of CIFDP implementation to countries are not only to enhance capacity of NMHSs for coastal risk warning, but also to improve interaction with users of the NMHSs' information services – primarily national disaster managers and decision makers. The CIFDP is implemented at national level by operational forecasting agencies, under the WMO framework and with technical guidance provided by WMO Groups of Exe0.7(e)13.4(or)-6()-11.2(ui)2.ov.n

