

Institutional and policy cocktails for protecting coastal and marine environments from land-based sources of pollution

David Osborn, Anjan Datta*

UNEP GPA Coordination Office, Kortenaerkade 1, 2515 AX The Hague, The Netherlands

Available online 17 August 2006

Abstract

The ecological integrity of coastal and near-shore environments is at the mercy of social, business, institutional and regulatory norms that dictate human behavior—not just at sea, but on land. The state of coastal lagoons, estuaries, harbours, semi-closed seas, and even the open ocean, is a mirror of anthropogenic activities on land that: (i) alter or destroy habitat; (ii) pollute groundwater, creeks and rivers that drain into the sea; and (iii) fill the atmosphere with particulates that settle on the sea. Land-based activities, such as mining, clearing vegetation for building roads, homes and hotels, destroy critical habitat and cloud river systems and estuaries with mud and silt. Since the broad range of land-based activities has a cumulative impact on coastal and marine environments, the sustainable development and protection of such environments pose challenges that demand multidisciplinary and cross-sectoral approaches and require far more than tough sanctions to punish the environmental “bad guys”.

This paper reviews the strengths and weaknesses of regulatory and non-regulatory options available to governments to manage the destructive and polluting activities of their citizens in coastal and marine environments. It considers the challenge of mixing these options and advocates for a strategic “cocktail” of instruments that best suit respective natural, cultural, constitutional and economic scenarios. The paper discourages rushing towards a single untested alternative to traditional command-and-control regulation, but to incrementally experiment with a variety of instruments and combinations thereof. Governments should avoid the tendency to treat various policy instruments as alternatives to one another rather than as potentially complimentary mechanisms. These may include improved regulation, tradable permits, discharge fees and voluntary programmes. The process of incremental experimentation with regulatory alternatives should be paralleled by timely and comprehensive evaluation of effectiveness, efficiency, and their relationship with other components of the broader system. This is the philosophy underpinning the development

*Corresponding author.

E-mail address: a.datta@unep.nl (A. Datta).

of National Programmes of Action as required by the 1995 Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA).

© 2006 Elsevier Ltd. All rights reserved.

1. The state of coastal and marine environments is a terrestrial issue

The ecological integrity of coastal and near-shore environments is at the mercy of social, business, institutional and regulatory norms that dictate human behaviour—not just at sea, but on land. Indeed, the state of coastal lagoons, estuaries, harbours, semi-enclosed seas, and even the open ocean, is a mirror of anthropogenic activities on land that: alter or destroy habitat; pollute groundwater, creeks and rivers that drain into the sea; and fill the atmosphere with particulates that settle on the sea. Land-based activities may destroy critical habitats and fill rivers and estuaries with excessive levels of mud and silt. Factories, hospitals, farms and densely populated urban centres all contribute to the nutrient and pollutant loading of rivers and near-shore waters, which can, *inter alia*, result in harmful algal blooms, contaminated seafood products, reduced fish stocks, unsafe swimming conditions and unpleasant odours.

The absorptive capacity of the oceans is not without limits and land-based sources of pollution cannot be permitted to continue or increase indefinitely. Both present and future generations have limits of acceptable change that must not be crossed. Healthy coastal and oceanic systems provide cultural backdrops, renewable food supplies, tourism opportunities, transportation highways, biotechnology supermarkets, and many more social and economic benefits. It is imperative that these systems be protected through timely and effective intervention from governments, adequately supported by industry and civil society under the auspices of multidisciplinary and cross-sectoral approaches.

The importance of governments taking the lead in action to address land-based sources of marine pollution and habitat destruction was again¹ emphasised at the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, in September 2002. Specifically, the WSSD Plan of Implementation² called for action to advance the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities³ with a specific focus on municipal wastewater, the physical alteration and destruction of habitat, and nutrients during the period 2002–2006 [1].

¹The duty of States to preserve and protect the marine environment has been reflected and elaborated upon in numerous global conventions and regional instruments. In 1982, the United Nations Environment Programme (UNEP) took the initiative to develop advice to governments on addressing impacts on the marine environment from land-based activities. This resulted in the preparation of the Montreal Guidelines for the Protection of the Marine Environment Against Pollution from Land-based Sources in 1985. The duty of states to protect the marine environment from land-based sources was placed squarely in the context of sustainable development by the United Nations Conference on Environment and Development in 1992.

²Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August–4 September 2002, A/CONF.199/20*; see Paragraph 33 of the WSSD Plan of Implementation at www.un.org/esa/sustdev.

³In November 1995, the international community initiated the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities. This initiative recognised the need for timely and effective intervention, and that the impact of land-based activities on the marine environment was a local, national and regional problem with global ramifications.

Download English Version:

<https://daneshyari.com/en/article/1724911>

Download Persian Version:

<https://daneshyari.com/article/1724911>

[Daneshyari.com](https://daneshyari.com)