

An International Comparison of Sustainable Coastal Zone Management Policies

FERENC JUHASZ

Environment Directorate, Organisation for Economic Co-operation and Development, Paris, France

Management of coastal resources includes a combination of sectoral and environmental policies. To implement a successful sustainable policy in any coastal region and for the country as a whole a high degree of integration between development and environment policies is an essential prerequisite. OECD governments at all levels, including at the international level, recognise the need for integration, but improvements in sustainable coastal resource management, i.e. maintaining the quality and quantity of the services flowing from coastal resources, have been limited. This paper examines, on the basis of certain criteria, the performance of OECD countries in coastal zone management and suggests measures to improve integration with the aim of promoting sustainable management of coastal resources.

I. Introduction

The Objective

The purpose of this paper is to provide an international comparison of coastal zone management policies amongst a number of OECD countries. The criteria used for comparison are those aspects of policies considered essential for sustainable management of coastal resources. Essentially the paper develops four themes: sustainable management of coastal resources, reconciliation of environmental and development aspirations, the role of an institutional framework for management and instruments for policy integration.

Sustainable Management

Sustainable management of coastal resources requires that these resources (coastal land, forests, inland and coastal waters, and marine resources) deliver over the long period (several generations) a constant flow of services per capita (absorbing capacity of coastal waters, siting of urban and industrial structures, recreation, etc.). Such an objective would, in turn, require the maintenance of a certain quality and quantity of these resources, and recognise the need to manage them as interdependent systems. To achieve such sustainable management governmental policies concerning the use of these resources (both by the public and private sector) and their conservation need to be carried out in a co-ordinated, integrated way.

* The opinions expressed in this paper are those of the author and do not necessarily reflect the views of the OECD.

Criteria for Comparison

Policy integration can be achieved on the basis of an institutional framework with the following characteristics:

- i) reconciliation of development and environmental policies and of the accompanying legislation;
- ii) creation of an administrative system that ensures co-ordination in policy planning, evaluation and implementation;
- iii) use of policy instruments that promote integration.

II. Reconciliation of Development and Environmental Policies and Legislation*

Development policies as used here include regional policies, industrial policy, tourism policy, energy policy and agriculture. Environmental policies are defined in a broad sense and include pollution control policies, pollution prevention policies, and conservation policies. Legislation refers to laws and regulations relevant to the policies described above.

Developmental and Environmental Trends in Coastal Areas

Overall OECD trends indicate that economic growth in coastal areas is faster than in non-coastal areas. The main indicators for this trend are population growth and coastal settlement, strongly reinforced by seasonal tourism. As old heavily polluting industries in the hinterland (e.g. based on low value coal mining areas) are being phased out they are replaced by new developments in coastal areas. Reasons for this trend include the relatively low cost disposal of waste, mainly in coastal waters, cheap transport and the attractiveness of a coastal climate combined with the higher mobility of the population than in the past.

There is little evidence that governmental policies have been successful in harmonising economic development with their environmental objectives. To the contrary, there appears to be a general reduction in the assimilative capacity of coastal waters, degradation of water quality, increasing population density accompanied with increased air pollution, reduction of green areas and reduction or disappearance of high value ecosystems such as wetlands and coastal forests.

* The information used in this paper comes from three sources (see Annex):

- i) eighteen (18) specific case studies conducted in OECD Member countries on coastal zone management practices in well defined coastal regions;
- ii) information provided by OECD government on coastal zone management policies at the national level;
- iii) a set of sectoral policy documents published by the OECD, e.g. tourism policy, energy policy, urban policy, environmental policy.

It is only in recent years that the importance of ecosystems (such as wetlands, the marine environment and landscape habitat) has been recognised for the maintenance of biological diversity and for the conservation of species. Consequently OECD societies are today placing a high value on their preservation and on policies to avoid or minimise their further disappearance.

From these trends it emerges that inspite of the recognition of the high environmental value of coastal resources, governments so far have not been successful, or have achieved only partial success in reconciling their economic and environmental objectives in coastal areas.

Legislation

Governments are attempting to handle these complex economic/environmental issues at two levels:

- i) broad coastal zone legislation which take different forms:
 - designating the various coastal zones of the country for various development purposes;
 - requesting provincial or regional governments to prepare coastal development plans;
 - revising existing resource legislation to reconcile it with environmental management objectives and to improve consistency in resource management;
- ii) specific legislation for pollution control and conservation:
 - establishing coastal water ambient quality for certain pollutants;
 - providing explicitly for conservation of ecosystem;
 - setting fishing quotas;
 - implementing measures for prevention of oil pollution;
 - establishing specific environmental legislation for a coastal area of very high value; e.g. inland seas.

On the whole legislation exists for pollution, often however too weak (e.g. penalties are too low to act as disincentive to pollute or measures for pollution prevention are not adequate) to minimise or avoid coastal problems. Legislation for conservation of coastal resources is insufficient or non-existent in many cases.

III. Administrative Framework for Integrated Management

The administrative framework for integrated management of coastal resources involves a vertical element: international, national, regional and local governments; a horizontal element: the various governmental departments involved; a public and private sector element: government, private industry, and the public at large; and a geographical element: regional/local authorities in the relevant coastal stretch and the economic drainage basin of the hinterland.

-- more efficient land allocation by reducing governmental subsidies to various economic activities (e.g. agriculture) which distort land prices. In some countries such policy changes are under review;

-- implementing development site taxes to capture windfall profits from zoning and using the tax to buy land for conservation. This approach has been used occasionally for conserving specific coastal stretches.

- ii) Pricing, which covers the cost of supply, depletion and environmental cost of provision, use and disposal of natural resources, integrates these activities into the market process at the appropriate value and leads to long-term sustainable management of these resources.

At present some resources are either badly underpriced or not priced at all leading to their overuse and overpollution. For example forest resources on the coast are valued at their timber value. The value of their water catchment, soil conservation services, as well as their ecosystem value in terms of sustaining habitat and plant life and their recreation value is not included in their price. Moreover the land value, i.e. without the forest and all these other services, is high for construction purposes (e.g. for building residential apartments).

Similar considerations apply to water, where not only is the actual value of water services underpriced, but the pollution of water through its use is undercharged.

Some areas with acute water shortages are now starting to charge prices closer to the real value of water (the marginal long run social cost).

The use of coastal water for discharge of pollution is free practically everywhere.

It is acknowledged that at this stage many environmental goods and services of the coastal zone cannot be reflected in the pricing system (e.g. preservation of a rare species). Governments have a responsibility to protect and maintain such goods and services for the public interest and future generations.

- iii) Economic instruments (charges, transferable permits, etc.) help the integration process by incorporating environmental measures into other economic activities (production, consumption and savings) and providing economic choices for the polluter/consumer.

Given the various types of polluting activities, charges and pollution permits for a well defined region could be widely used as integrating instruments. The use of economic instruments is presently limited in coastal resource management.

Such instruments would also provide revenues to construct infrastructure (treatment plants) or for conservation purposes (e.g. purchase of land with special values).

Tourist charges in coastal regions are now used fairly widely, but they are not activity specific neither are they used for pollution control purposes.

Concluding Remarks

Sustainable development of coastal resources as a concept has not yet found wide application in the management of OECD coastal regions. Neither national nor regional/local authorities use it explicitly as a guiding principle for their policies.

There is, however, a recognition of the need for improved policies and management practice to maintain and enhance the quality of coastal resources, in particular coastal waters, and to conserve ecosystems.

The need for a higher degree of policy integration to achieve such objectives is now also being recognised both at national and local levels. Some governments have already introduced measures to improve integration of coastal policies and they include:

- encouragement and incentives including financial assistance, by governments at the national level to promote integration;
- co-ordination of economic development policies at the national level, particularly in the field of energy, transport and environment, is now being encouraged;
- some governments have prepared a national legislative framework, which gives guidance for regional and local authorities in the formation of the administrative framework and for the implementation of policies; and
- the need for appropriate pricing of natural resources and charging for their use is now widely recognised.

The interest that OECD governments have been showing in recent years in coastal zone management is a clear indication of their concern in efficient management of coastal resources. International co-operation is an essential part of the national effort to maintain the quality of these resources as well as to conserve them for future use.

A N N E X**I. Case Studies on Integrated Management**

- P. A. GOLDIN South-Eastern Coast of Tasmania,
Australia;
- A. GILMOUR The Great Barrier Reef, Australia;
- D. JAMES The Sydney Region, Australia;
- A. DORCEY The Frazer River Estuary, Canada;
- Ph. PERGANTIS Messolonghi - Aitoliko
Wetland Area - Greece;
- Cl. FRANZIA &
F. JUHASZ The Lagoon of Venice, Italy;
- K. SANBONGI The Seto Inland Sea, Japan;
- F. RIJSBERMAN The Baltic Sea;
- F. RIJSBERMAN The Eastern Scheldt Estuary, Netherlands;
- J. STEWART,
E. PENNING-ROUSELL &
S. THORNTON Salmon Aquaculture: The Lenka Project,
Norway;
- S. THORNTON Evaluation of New Coastal Zone
Legislation, New Zealand;
- C. BORREGO The Ria de Aveiro;
- J.-B LACHAVANNE Lake Geneva, Switzerland;
- T. BALKAS &
C. CHUNG Izmir Bay, Turkey;
- D. PARKER Coastal Zone Protection Dorset and
Hampshire, United Kingdom;
- J. CUMBERLAND i) Chesapeake Bay, United States;
- G. WEBSTER ii) Chesapeake Bay, United States;
- I. SIMUNOVIC Kastela Bay, Yugoslavia.

II. OECD Publications

Pricing of Water Resources, Paris, 1987;
Agricultural and Environmental Policies, Paris, 1989;
Renewable Natural Resources, Paris, 1989;
Water Resource Management, Paris, 1989;
Economic Instruments for Environmental Protection,
Paris, 1989;
Tourism Policy and International Tourism, Paris
(Annual publication);
The Economics of Sustainable Development, Paris, 1990.