



Review

Historical antecedents and local governance in the process of public policies building for coastal zone of Brazil

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ABSTRACT

Brazil has a very big coastal zone of approximately 514,000 km² that embraces 397 municipalities in 17 coastal states. Its diversified area supports high variability of socio–economics activities leading to serious conflicts in terms of coastal space and resources competition in an intensive human occupation context. This paper describes the past and present processes of coastal planning in Brazil and its mechanism towards the establishment of a coastal management mode, capable to assure the desired sustainable development of the coast. It explains the policy trajectory of coastal Brazil and the way in which it is intended to be integrated into the national socio-political system. The National Policy for Sea Resources (PNRM) was a significant advance in organizing the multiple uses of the coastal and marine zones of Brazil. Established in the 1980s, the PNRM has been reviewed bi-annually through new proposed action plans. The Brazilian Coastal Management Plan is analyzed trying to highlight the role of coastal municipalities in the planning and management processes. The role of local communities and municipalities in building public policies and management processes is still weak in Brazil and possibly can be enhanced with a better evaluation model and increasing local participation.

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1. Antecedents of coastal planning in Brazil

The Brazilian Coastal zone has an approximate area of 514,000 km², of which about of 324,000 km² correspond to the territory of the 395 municipalities in 17 coastal states, included here the surface of inland waters, and 12 miles of Territorial Sea (Brasil, 2008). The Brazilian coast is a diversified space due to the variety of its environmental characteristics and to the socio-economic activities in that area. Characterized as a zone of multiple uses, over time the distinct economic activities in the coastal zone have led to serious conflicts in terms of the use of the soil, conflict made even more serious because of the intensity of human occupation. The diverse natural environment and kinds of uses of the coastal space constitute a complexity that demands effective planning and regulation.

Approximately 74 million people, 40 percent of Brazil's population, lives in the coastal zone in more than 400 counties. The mean population density in this area is 105 inhabitants/km², five-fold more than the national mean (20 inhabitants/km²). Population concentrations vary along the Brazilian coast. There are regions with low demographic density such as Amapá state, with 6.1 inhab/

km² in the coastal zone, while in Pernambuco (803.0 inhab/km²) and Rio de Janeiro (656.5 inhab/km²) have the highest coastal population concentrations. In general, coastal population is smaller in the north (4.0 million inhabitants) and south (3.3 million), and larger in the northeast (17.4 million) and southeast (16.0 million). Given the current population growth trend, problems associated with this are expected to increase. The construction of houses in areas of high environmental sensitivity, such as dunes, mangroves, and estuaries, the lack of basic sanitation, along with agricultural and urban activities, degrade the natural environment through organic pollution, deposition of sediments and destruction of natural habitats (Marroni and Asmus, 2005).

Economic activities, historically, were concentrated along the coast. These activities include oil extraction and refining, ports, agriculture, aquaculture, mineral extraction, fishing, cattle raising, reforestation, salt production, and summer resorts and tourism. For historical and structural reasons, economic growth was based on industrialization in the coastal region, inducing population and urban growth. This strong association between urbanization and industrialization characterizes the processes of territorial, population and economic dynamics in Brazil and, as a consequence, of the coastal zone.

Currently, the focus of interest of the economic use of the Brazilian continental shelf turned to the extraction of oil and gas within its boundaries. Brazil has extracted oil of its continental

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shelf, consistently since the mid-1990, increasing its production from 2010. Meanwhile, the country has made progress in developing new technologies for prospecting and extracting oil and gas in deep waters on the continental shelf and beyond its limits, with perforations that exceed 1800 m of seafloor sediments. The new system exploration and extraction of oil and gas offshore established a complex support structure and new activities, affecting and compete with other economic uses, such as inshore fishing and deep sea (Marroni, 2011). The establishment of drilling platforms for oil and gas and the intense maritime route used by boats to support production systems demanded immediate action from the Brazilian environmental protection agency (IBAMA), determining fishing exclusion zones in an attempt to prevent damage to operating structures and accidents with the fleet. This initiative has generated conflicts between activities and has made the fishery system as a whole, to become the biggest reason the establishment of mitigating and compensatory measures related to oil and gas.

The preoccupation of the Brazilian government with the use of maritime resources and coastal spaces started in the 1970s with an environmental review of state planning. In 1973, the Special Secretary of Environment of the Presidency was created, a meaningful step in the institutional history of this process. A year later, the Interministerial Commission of Sea Resources was formed. Its main goal was the coordination of themes that would lead to a national policy for the coastal region of Brazil, issued through Decree n. 74 577, of 12 September 1974 (Asmus et al., 2005; CIRM, 2011).

However, only with the latest Constitution of the Federated Republic of Brazil, sanctioned in 1988, did legal questions related to the environment start to be shaped and to have some effect.

Before we begin a brief historical presentation of policies, plans and programs related to the area of oceans in Brazil, it is important to explain and analyze the federal Constitution, which refers to essential functions and rules that discipline and frame the competencies between the federal government, states, and counties. Understanding these mechanisms is extremely relevant for this study as these government powers direct their work based on the respective plans for the coastal-maritime management of Brazil.

In chapter VI, article 225, of the Brazilian Constitution (*Constituição da República Federativa do Brasil, 1988*), we notice a preoccupation with the environment: “everybody has the right for an ecologically balanced environment, a good of common use of the people and essential for a healthy quality of life, imposing for the Public Government and for the population the duty of defending and preserving it for both present and future generations”.

Article 225(4) establishes that the coastal zone is a national patrimony. For this reason, its usage as a law aims at “preservation”. However, although the coastal zone is configured as a national patrimony, it cannot be confused as federal patrimony or state property. The latter is where the state performs its domain. The national patrimony constitutes a public interest good, or, as a nation. The coastal zone is a patrimony that interests all Brazilians and, for this reason, its protection as well as its natural resources, respecting the peculiarities of each region, is vital. Regimented rules should be edited to regulate the use of this area in federal, state, and county contexts and, if applied to coastal management, it is inferred that the state (Nation) will be responsible for the fulfillment of general rules. The states should respect the rules edited by the Nation, and be able to establish complementary rules or standards. It is the responsibility of municipalities to protect local interests, legislating when some peculiarity demands or justifies this. The difficulties appear to be due to the lack of habit of communities of fighting for better life conditions and wasting chances of taking forward their claims. It is clear that federal or state rules do not include standards sufficient to meet the demands or necessities of different localities Fig. 1.

The implementation of policies pertinent to the oceanic area of Brazil is oriented to the rational use of resources of the coastal-maritime zone in order to guarantee the quality of life of the coastal population and to effectively protect existing ecosystems. As a result, the improvement of human resources to work in this environment is a main factor in the formalization of coastal and maritime policies. Specific policies for certain coastal spaces are necessary with the aim of improving life conditions of the population according to regional peculiarities. Otherwise we will be delegating to future generations serious problems that may interfere with their quality of life.

Improving the life conditions of the community is the real function of “local governance”. However, over a period of time, the people, in general, have assimilated the false idea that they are incapable of doing something or interfering in the “harvest” considered to be the domain of the public government, which means the people governing its country, state, county or community.

Due to this, in many areas, the population has started to get involved, organizing themselves in groups to deal with local problems. Such an attitude does not exclude the responsibility of the state (government), rather it calls on the state for action through plans and strategies set up by professionals in the system or by the population itself. It is this “local governance”, democratically organized through community participation, that executes or forces the bureaucracy or government institutions to action aimed at improving the quality of life of its citizens (Table 1).

2. Policy development process

The National Policy of Environment (PNMA), instituted by Law 6.938 of 31 August 1981 has as its main objective to implant in the country “a harmonization of the social-economic development with the preservation of quality of the environment and the ecological balance” (art. 4^o), “considering the environment as a public patrimony” and “aiming at the population usage” (art. 2^o) (*Política Nacional Do Meio Ambiente, 1981*). This law organizes the national system of environmental control in the country, delegating to the Environment National Council the responsibility of forming a legislative body to carry out the actions foreseen in the PNMA.

The National Policy for Sea Resources (PNRM), instituted in 1980 through a Presidential Directive, has the Interministerial Commission for Sea Resources (CIRM) as its executing organ. CIRM’s coordinating institution is the Navy. CIRM aims to be a connecting element among the various federal sectoral policies concerning the marine and coastal environment, having “as main reason setting the essential measurements to the promotion of integration of the Territorial Sea and the Continental Shelf to the Brazilian space and the rational exploration of the oceans” (PNRM, 1980; CIRM, 2011; CIRM, 2012).

CIRM is a “multidisciplinary” unit supervised by the Navy. It has a Secretary, known as SECIRM, which gathers and executes all program activities. However, the unit has its own autonomy concerning hiring or creation of groups and subgroups of technical and administrative workers. Implementation of activities connected to sea resources is not centralized. The Commission tries to connect staff from within the different ministries, states, counties, research institutions, the scientific community and private entities, according to their respective competencies and in consonance with the decisions of the PNRM. Therefore, CIRM works as an “articulator” between the “public and the private” in a situation in which scientific professionals are invited periodically to participate in meetings, projects and policies originated by it.

The “competences and attributes” of CIRM directly assist the President in the execution of the National Policy for Sea Resources.

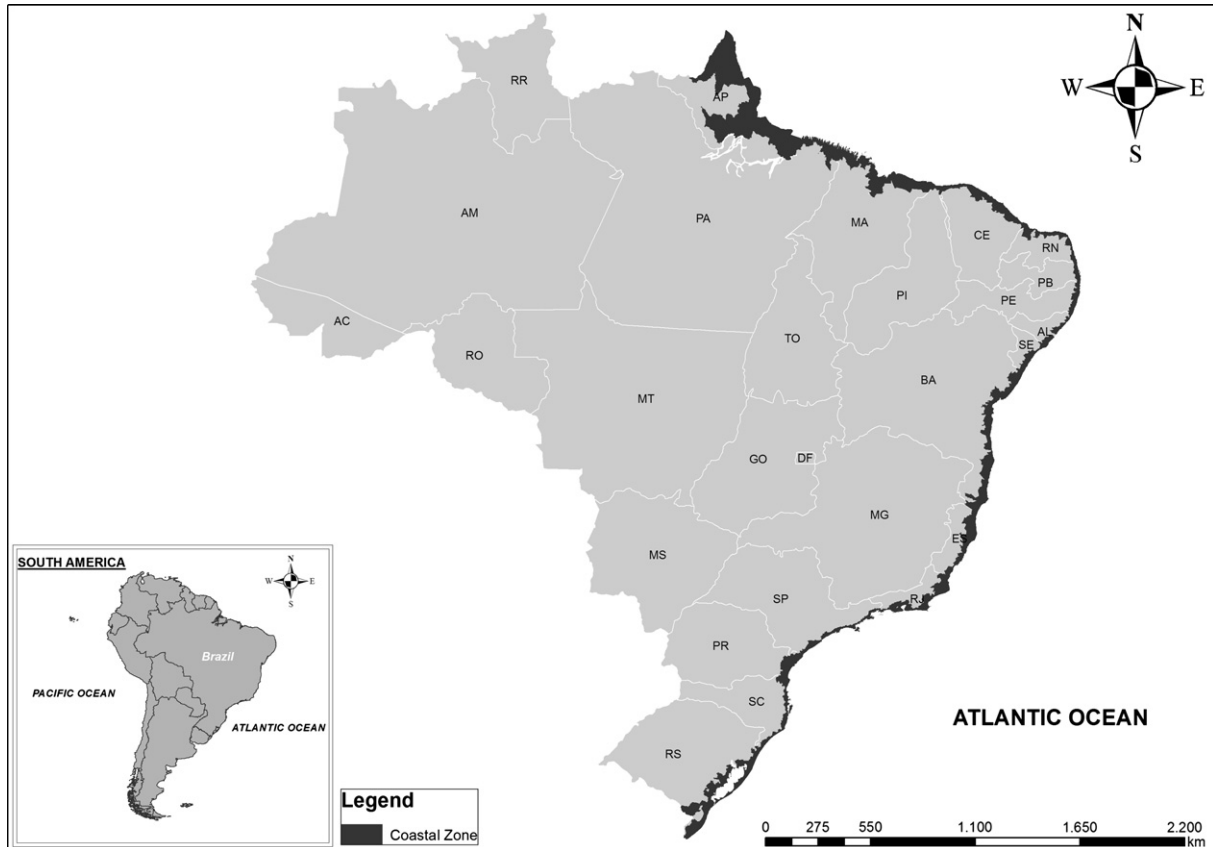


Fig. 1. Coastal zone in Brazil, officially composed by 295 coastal municipalities. The two-character names are the anachronisms for the Brazilian states.

CIRM proposes the general rules of this Policy; monitors the results and, where necessary, suggests possible changes to the President; presents opinions and suggestions; and establishes connections with other ministries, state governments and the private sector to attain the necessary support for the execution of the plans and programs of PNRM for which they share common objectives. Table 2 outlines the main attributes of CIRM. The focal point of CIRM is the National Policy for Sea Resources, which was instituted

on 12 May 1980. The National Policy for Sea Resources consolidates the work of CIRM to undertake measures for the integration of the territorial sea and the continental shelf to the Brazilian space and for the rational exploration of marine resources.

The National Policy for Sea Resources (PNRM) was a significant advance in organizing the multiple uses of the coastal and marine zones of Brazil. Established in the 1980s, the PNRM has been reviewed bi-annually (sectoral plans). The frequency of reviews is

Table 1
Antecedents of coastal planning in Brazil.

| Year | Antecedents |
|-------------|--|
| Early 1970s | Environmental review in state planning done in the country |
| 1973 | Opening of the Special Secretary of Environment of the Presidency. This represents the beginning of an environmental view in the state planning done in the country. |
| 1974 | The Interministerial Commission for Sea Resources (CIRM) was opened. This represents the concern of the Brazilian government with the usage of coastal and marine resources. |
| 1980 | Due to the work done by CIRM, the National Policy for the Sea Resources (PNRM) is instituted. This policy is implemented through pluriannual plans and programs elaborated within CIRM. |
| 1981 | The National Policy of Environments (PNMA) instituted. It aims at the preservation, improvement and recuperation of environmental quality. |
| 1982 | CIRM opens a Subcommittee of Coastal Management, which organizes a Seminar in Rio de Janeiro (RJ). |
| 1987 | CIRM established the National Program of Coastal Management – GERCO, specifying the zoning methodology and the institutional model for its application. |
| 1988 | The Federal Constitution of 1988 is a highlight in the legal and institutional process of Brazilian coastal management, as it declares the Coastal zone a national patrimony (Article 225, § 4). The National Plan of Coastal Management was established by the Law 7.661/88, with the political and judicial support of CIRM and National Environmental Council (CONAMA). |
| 1990 | Resolution CIRM 001/90 approved the first version of PNGC, defining the methodological basis, the institutional model and the tools for the opening of GERCO. In the same year, the Law 8.028 creates the Environment Secretary of the Presidency. |
| 1992 | Special Secretary of Environment (SEMAM) is transformed in Environment Ministry. |
| 1997 | Resolution 005 of CIRM establishes PNGC II, which creates the Group of Integration of the Coastal Management and the Subgroup of Integration of the State Program. |
| 2003 | The Coastal Agency is created, an Organization of the Civil Society of Public Interest aiming at cooperating with the actions of integrated coastal management. |

Table 2
Attributes of the Interministerial Commission for Sea Resources.

| CIRM |
|---|
| <ul style="list-style-type: none"> – Orient the rules proposed for the execution of PNRM. – Plan activities related to sea resources. – Coordinate the elaboration of pluriannual and annual plans and programs, common and sectoral. – Develop activities related to the sea and the Antarctic. – Follow the results and propose changes in the execution of the Brazilian Program for the Antarctic (PROANTAR). – Produce reports and suggestions related to issues concerning sea resources. – Follow the results and propose adjustments for PNRM. |

Modified from CIRM, 2012

justified because of the dynamic changes in the population and the marine environment. Even though it was created during the Brazilian military regime, the PNRM has changed and adapted to the current regime and provides a strong governance instrument for the coastal area. The Presidential Decree # 5.382 (3 March 2005 – National Policy for Sea Resources) (PNRM, 2005) reformulated the PNRM through the VI Sectoral Plan for Sea Resources. The Interministerial Commission for Sea Resources was responsible for reviewing the rules which guide this policy. The revised policy sets out the basic rules that guide all initiatives in the fields of teaching, research, exploration and exploitation of sea resources. Currently, one of the goals of the PNRM is to introduce measures aimed at promoting the “integration of the territorial sea and the continental shelf to Brazilian land and to the rational exploitation of the oceans, involving living resources, minerals and the energy of the water column, seabed and seabed sub-floor that are of interest for the sustainable development of the country.” The policy also outlines the level of participation of public institutions, community organizations and private entities in undertaking these measures (V PSRM, 1999; VI PSRM, 2005).

The basic principles of PNRM (Table 3) harmonize the National Policy, wherever possible, with the National Sectoral Policies. These principles include non-centralized and participative execution, coordination of financial resources, definition of priority projects, stimulation of private sector inclusion, protection of biodiversity and genetic patrimony, supervision of governmental action, and collaboration with international programs. In order to implement these principles, it is necessary to ensure the total cooperation and use of boards of technical and scientific staff throughout the country. Individuals with specializations in fields related to the sea and its resources should enhance the boards through qualification courses. It is important to update Brazilian legislation concerning sea resources to ensure the sustainable development of the country and, most importantly, to stimulate and extend technical-scientific exchange (PNRM, 1980; PNRM, 2005).

To ensure the success of this Policy, the President should make use of the Interministerial Commission for Sea Resources (CIRM).

Table 3
National Policy for Sea Resources – principles.

| National Policy for Sea Resources |
|--|
| <ul style="list-style-type: none"> – Harmonization with the National Policy. – Non-centralized and participative execution. – Coordination of financial resources. – Definition of project priorities. – Stimulation of private sector inclusion. – Protection of biodiversity and genetic patrimony. – Supervision of governmental action. – Collaboration with international programs. |

From the National Policy for Sea Resources, 2005

The Navy who presides over CIRM may also be assisted by representatives of the following ministries: Defense (Navy Command), Foreign Relations, Transport, Agriculture, Education, Development, Industry and Foreign Trade, Mines and Energy, Planning, Budgeting and Management, Science and Technology, Environment, Sport and Tourism, as well as the National Council of Scientific and Technological Development and the Secretary of Planning of the Presidency (CIRM, 2011; CIRM, 2012).

The strategies for implementation of the National Policy for the Sea Resources (PNRM, 1980; PNRM, 2005) are found under the “conditions” for its execution. First, the PNRM will be consolidated through pluriannual and annual plans and programs. To implement these plans, the CIRM, in consultation with the Secretary of Planning of the Presidency, should aim to coordinate programs and to better use resources. PNRM’s pluriannual plans also need to include objectives, strategies, proposed programs, financial estimates, and sectoral programs in specific projects (basic documents of work). Planning to establish action strategies will have to consider the following aspects:

- 1) human resource development;
- 2) marine research, science and technology;
- 3) exploration and sustainable use of sea resources.

It is also of fundamental importance to review action strategies with the aim of maximizing the execution and management of the current plans and programs resulting from the broader policy.

2.1. Updating the National Policy for Sea Resources through the sectoral plans for Sea Resources

The Sectoral Plan for Sea Resources (PSRM in portuguese) constitutes and “update” of the National Policy for Sea Resources and is valid for several years (Table 4). Planning of all activities related to sea resources in all the units involved in this area should conform to the guidelines of the PSRM.

According to the last review of the Sectoral Plan for the Sea Resources (VI PSRM, 2005), the importance of living marine resources not only come from their exploitation for the food production, but also from their contribution to biodiversity and as genetic patrimony, in particular their relevance for biotechnology. The focus on marine biodiversity was an innovation in the updates proposed in the VI PSRM for the National Policy for Sea Resources (PNRM dated 1980). The dynamics of ecological and social movements favors the study of biodiversity linked to technology, i.e. biotechnology. In addition to constituting a new framework for the PNRM, biotechnology provides new opportunities for research and human resource development and will generate more precise information on the economic value and potential of Brazil’s coastal-marine potential.

The VI Sectoral Plan for the Sea Resources (VI PSRM, 2005) also updated legislation concerning the exploration of non-living marine resources. According to the sectoral plan, these mineral resources, both on the seabed and seabed sub-floor, are economically valuable, for example, petroleum and natural gas. As finite resources they must be exploited in a rational and sustainable manner. There is also a strong incentive to conduct scientific research to find alternative renewable energy sources to replace non-renewable resources as they are depleted.

In addition to updating the National Policy for Sea Resources, the Sectoral Plan for the Sea Resources is subject to and in agreement with basic instruments of international law to which Brazil is a signatory. These legal instruments define the global judicial framework and or outline the actions that each country should

Table 4
Sectoral Plan for Sea Resources (1982–2015).

| Plan | Period | Characteristic |
|-----------|-----------|---|
| I PSRM | 1982–1985 | Structured activities of research and prospection of sea resources, leading to meaningful interests of the Brazilian society for the use of these resources in the national productive system. |
| II PSRM | 1986–1989 | Established objectives for the overcoming of socio-economic difficulties of the country. Scientific and technical capacity of the organizations and human resources involved in the projects. |
| III PSRM | 1990–1993 | Validation of II PSRM. Study of the effects of confirmation, by Brazil, of the United Nations Convention about Sea Rights – UNCSR, establishing as a main target the investigation and rational exploration of resources in the Exclusive Economic Zone – EEZ. |
| IV PSRM | 1994–1998 | Adequacy of III PSRM. Implementation of the Program for the Study of Sustainable Potential of Live Resources Capture of the Exclusive Economic Zone – REVIZEE, which gained a new institutional impulse. |
| V PSRM | 1999–2003 | Update of IV PSRM, adapting it to the conjuncture foreseen for its period. |
| VI PSRM | 2004–2008 | PNRM update, with precepts aimed at sustainable development, preparation of human resources and incentive to research. |
| VII PSRM | 2008–2011 | Recognition of the oceans role in the global climate change. Highlight the need of cooperation among Government, academia, civil society and private sector to manage the sustainable use of sea resources. |
| VIII PSRM | 2012–2015 | Introduces a novel model for the integrated and participative management of sea resources, involving several ministries, scientific society, and private sector. Stimulates integration of actions. Highlights the importance of data availability for society. Defines the conservation of sea resources a priority. Stimulates the development of human resources and the international cooperation. It has an especial focus on the natural resources of coastal zones |

From the *National Policy for Sea Resources, 1999, 2005, 2008, 2012.*

undertake in order to meet the common goal of sustainable use of sea resources.

The Sectoral Plan for the Sea Resources is also subordinate to internal legislation such as the 1988 Constitution. The Constitution incorporates the concepts of maritime spaces as defined by the United Nations Convention on the Law of the sea. The Constitution defines the territorial sea, the resources of the exclusive economic zone (EEZ) and the continental shelf as “goods” of the Nation and the coastal zone as Nation patrimony. It is also important to note that the PSRM is based on the “precautionary principle” in relation to exploitation and use of sea resources. This principle states that the absence of complete scientific information and/or the lack of absolute certainty should not be used as a reason to postpone the adoption of decisions and measures to prevent degradation of the environment when there is a risk of serious or irreversible ecological damage. The PSRM also adopts the principles of integrated management of coastal and marine environments. It also incorporates the concepts of sustainability (ecological, economical and social sustainability) and the necessity of non-centralized and participative planning to facilitate the integration and ensure the achievement of its proposals (V PSRM, 1999; VI PSRM, 2005; VIII PSRM, 2012).

It is important to understand the theoretical and leadership basis of the PNRM and how the mechanism of the sectoral plans works. The pluriannual plans assess the adequacy and “modernization” of the National Policy for Sea Resources (PNRM). These plans provide the Executive with operational guidelines for a period of four years. This political update through pluriannual plans and programs is developed by the Executive Secretary of CIRM.

It is important to note that the regular updating of the PNRM by the sectoral plans is also a result of international treaties and agreements signed by Brazil that are aimed at protection and rational use of coastal and marine resources. For example, the United Nations Convention on the Law of the Sea (UNCLOS) deals with, among other topics, mining of the deep oceanic seabed. The Brazilian National Congress ratified UNCLOS in December 1988, and the convention came into force on 16 November 1994. Another important matter of national interest that is the convention deals with is straddling fish stocks and highly migratory fish which, in association with Chapter 17 of Agenda 21 (Agenda 21, 1992) formed the basis for various programs in CIRM.

The frequent updates of the PNRM renew the specific plans and programs for each area that guides the policy as a whole. The non-centralized execution of the PNRM, with the participation of states, cities and civil organizations, encourages proposals that aim at the

resolution of conflicts in specific areas of the coastal and marine zones of Brazil. Executing public policies and plans is transformed into a significant part of the analytical process because the execution and management of these plans involves specialized technical staff to manage financial resources for each area. To be successful, they must analyze and evaluate results to see which most benefits the population and balances the areas covered under the PNRM.

Presently at its VIII version (2012–2015), the Sectoral Plan for Sea Resources introduces a new model for integrated and participative management. Several institutions including ministries, academic community and private sector took part on its elaboration and jointed action of execution. The plan has also assumed an explicit commitment regarding the development of science, technology and innovation on ocean subjects, including climatologic and oceanographic monitoring initiatives. In the same way, the plan has proposed to make available for society those data and information in real time, trying to enhance the up-to-date knowledge on environment resources from coastal zones (VIII PSRM, 2012).

2.2. National Coastal Management Plan

Federal Law n°. 7.661 of 16 May 1988 initiated the National Coastal Management Plan (PNGC, 1988) as part of the National Policy for Sea Resources and the National Policy of Environment (Plano Nacional de Gerenciamento Costeiro, 1988). This plan establishes the principles that should lead to coastal management, concepts and definitions, objectives and rules, as well as instruments, competences and identifies resource sources. However, although it might define some aspects of management, the PNGC cannot be characterized as the only juridical norm to guide citizens' actions and, later, their connection to evaluating government policy.

On 18 April 1990, Decree n°. 99.213 created the Coordination Group of Coastal Management – COGERCO (PNGC II, 1997; CIRM, 2011). On 27 June 1995, however, this decree was cancelled by Decree n°. 1.540, which sets out COGERCO's current constitution. The updated and self-applicable plan should be submitted for consideration to the Interministerial Commission for Sea Resources, which is responsible for approving it in conjunction with the National Council of Environment, a unit of the Environment Ministry. Following this determination, it has been approved by CIRM resolution n°. 1 (21 November 1990). The National Plan of Coastal Management has been substituted by the National Plan of Coastal Management II – PNGC II, following acceptance of CIRM resolution n°. 5 of 3 December 1997 (PNGC II, 1997).

The National Plan of Coastal Management II (PNGC II) was promulgated after it was submitted to CONAMA (National Council for the Environment in Brazil) and approved by CIRM resolution n°. 5. As a result, coastal management, as a whole, will have a more focused methodology in plans and action strategies that will involve the Nation, states, and counties (PNGC II, 1997).

The new plan contains principles that will direct coastal management, as well as norms and rules for its implementation in states and counties. It should be noted that PNGC II, like PNGC, does not establish the zoning of uses and activities, nor does it determine specific measures to be adopted or analyzed in the coastal zone. Such specifications are the responsibility of the other policies to be published and set by the Nation, states, and counties. The National Plan of Coastal Management – PNGC II, might be understood as a “way of doing things” which contemplates actions and instruments capable of minimizing the existing use conflicts on the Brazilian coast.

At first glance it would appear that even within “an action plan” such as PNGC II there is a tendency to generalize established targets. This is because, even though there are duties to be executed in regional sectors, there is no clear definition as to how existing content and information, or that which is about to be gathered, can be used and advertised, for example, within the counties. How can we “simplify” and “advertise” technical information, so often complicated, for the understanding of the coastal population, who is, actually, the most interested part in the process? In this respect, there can be a problem as it is not always possible to have a high level of education which can make the understanding of facts easier. Even within the global action plan, there should be a pre-occupation with environmental education programs that aim not only to increase the participation of the community but also encourage interesting and constructive practices in local communities. These practices should be, at first, attended by specialized technicians, who will provide community members with opportunities to evaluate their life situation or reality, which assists in meeting the fundamental principles of the main action plan.

Meetings in communities close to the Brazilian coast are quite common. Exploration of tourism, fishing, harbor zones, and the supposed value of the marine environment to quality of life are only some of the features that closeness to the Brazilian coast provides. However, excessive exploitation is often present in these areas as a result of overpopulation in coastal areas, which constitutes a serious reason for redirecting use of the space. The state and county governments need to be involved in attaining these objectives, elaborating accessible routes for the population with the purpose of obtaining statistical data which will support future decision-making. Only then can it be said that the National Plan of Coastal Management is implemented and developing. This does not mean that the process is free of problems and that it does not face considerable difficulties in working them out, quite the opposite in fact. Nevertheless, in what is connected to the management conception and the standardization of the instruments to achieve it, the path to be followed seems to have happened.

When mentioning objectives, it is often said that targets should be reached. From this point of view, it is quite evident that PNGC II, more than being an action plan, is an attempt of a systematic process of transformation of the present reality. Among the steps to be undertaken, there is the one which sets up and adapts the counties' and states' plans and programs in order to enable the launch of a consistent and investigative work of across the region.

One of the most important aspects of the plan is the selection of a management process that is integrated, non-centralized and participatory. This procedure focuses, theoretically speaking, community participation in the decision-making process setting non-centralized management as a target to be reached. Integration

is characterized as a bond between all the steps of the action plan. This process should inaugurate a new period of democratic dynamism between public government and the other segments of society. Through this, the division of responsibilities and tasks is made possible, with the aim of restructuring the area. Such a methodology favors the involvement of the community in the process of regional development.

In the technical area, governments should stimulate integrated and multidisciplinary studies, so that information or statistic data are obtained or made available, with the aim of a more directed, productive and immediate action. Among the actions planned by the PNGC II is to maintain diversity in the coastal zone of Brazil.

The global plan establishes that development should have the support of three areas of government: federal, state and counties. States will have autonomy for the execution of regional proposals, as long as they do not go against the principles of the national plan. The county, as a consequence, will execute the state proposal, although it is a responsibility of the state to indicate the emergency areas to be attended to. The Municipal Plan of Coastal Management (PMGC), legally established, should explain the work of the National Plan of Coastal Management (PNGC) and the State Plan of Coastal Management (PEGC), with the aim of implementing the County Policy of Coastal Management, including the responsibilities and the institutional procedures for its execution. The PMGC should have a close connection with the use and territorial occupation plans and other pertinent measures to county planning. PNGC II makes it clear that it is important to plan actions through definition of priorities and elaboration of annual operative plans at the federal, state and city levels (PNGC, 1988; PNGC, 1997; PNGC, 2004).

A frequent problem in developing and implementing municipal coastal management plans in Brazil is the lack of a more consistency support in terms of funds. In a study that used the coastal city of Rio Grande in Southern Brazil as a representative case for coastal municipalities, Pereira (2012) pointed the recurrent low budget to support environmental programs, including zoning and the establishment of coastal management plans. Such budgets can be as low as 0.5% of the total annual budget for coastal cities. Scarcities of funds to support local coastal management initiatives seems not to be rare in Brazil and represents a serious constrain not only for the plans execution, but also for the establishment of the adequate governance for coastal management.

3. Coastal municipalities' – participation in public policies

The recent oil exploration activity generates significant indirect socioeconomic effects. Due to the intensity and variety of goods and services it involved, has favored the rapid growth of coastal municipalities, located in front of the exploration areas. Municipalities that recently had a small size, with economic activity centered on fishing, had significant population growth, demand for housing, goods and services and significant changes in traffic of vehicles and vessels. The sudden change in the activities of small coastal municipalities generated serious urban problems, such as lack of sanitation, disordered constructions in hazardous areas, loss of coastal ecosystems and increasing violence. This is a framework that has occurred simultaneously with a sharp decline in coastal fisheries, aggravating even further the economic and social condition of coastal communities.

Every environmental crisis has been understood as wrong adaptation and behavior. Therefore, the way in which an environmental crisis will be expressed will result in noticeable changes in humankind, as well as in society's behavior. If humankind, in its social system, is identified as being the main factor for this lack of balance, it seems appropriate that environmental policies,

investigation and education focus on, almost exclusively, damage manifestation and that little attention is given to human behavior as the main cause. Surely education changes perception and heightens awareness and, because of this, environmental education was included as one of the main components in the environmental action plans (Marroni and Asmus et al., 2005).

The level of “awareness” of the community involved in action plans of such importance (PNGC II) should include by necessity the whole region. With this proposal, the technician, the professional, will work with priority problems identified by the community groups. As these are seen and analyzed from the perspective of the inhabitants, they may differ from those identified by the specialists. This “contact” between the population and the public government is necessary for a city to work. It is considered strategic and important that the city initiative is involved in processes of integrated coastal management. The demonstration of the city interest to finding solutions for its conflicts forces state action, which puts into practice the plans established by the central government. Actually, what seems to be decentralization from the central government is, in fact, the division of social and sectoral responsibilities. The decentralization means a change of competences of many characters, especially social, but overall a transfer of autonomy and real power of decision-making for the states, and more specific for the municipalities. As a consequence of these transformations, local governments have an expanded presence in the group of state apparatus and in the definition of public policies. The presence of the municipality is reinforced as the best option of viability for implanting a managerial process. This is justified as it is the cities which can better gather the efforts in favor of rescuing the local sustainability. If each city government were organized and developed its own management plans, according to the national plan, the exchange of information and solutions at the state level would be made easier and optimized. As well, community involvement would become more expressive, valuing, even more, regional analysis and proposals.

All of those who plan or manage the city government should bear in mind a future perspective, a clear view of the present and a respect for the examples (both positive and negative) from the past. They should consider all social aspects which are part of the context, know the physical-natural characteristics of their surroundings, their historical and cultural potential, after all, as well as the dynamic structure of their city. This knowledge will be useful so that the objectives expressed in the managerial plan are reached.

As cities face scarcity of resources, both economic and managing capacity, or minimal levels of community intervention, actions should be planned that aim to efficiently handle the available resources. PNGC II can be viewed as a continuous and sustainable process in which various social, political and governmental sectors interact concerning a common project with a possibility of overcoming conflict. A successful action plan reinforces the credibility of the governors, facilitates the viability of integrated management and, theoretically speaking, contributes to strengthening of a democratic culture.

PNGC II, at the city level, can be considered as an instrument in the coastal management process through which society and the state establish a common future in the medium or long term. This common future would be conceived through a process of defining objectives, targets and strategies related to coastal management, enabling public well-being due to the preservation of the marine environment. Local development, through the common group, should lead to the preservation of coastal ecosystems and well-being of the population.

The city of Rio Grande is an example of coastal municipalities that had attempted to implement coastal zone management plans in Brazil. The plan elaborated for Rio Grande was named Municipal

Environmental Plan (PLAM) and has become a management support tool, mainly used within the Municipal Environmental Department of the city. PLAM is composed by an environmental inventory and diagnosis and integrates the different tools, as the Ecological-Economic Zoning, the Municipal System of Environmental Monitoring, the Municipal Environmental Quality Report, and the Neighborhood Impact Study. The environmental programs composing PLAM include the (1) Environmental Control and Licensing Program, (2) Environmental Management and Planning Program, and (3) Environmental Education and Social Communication Program. Each program, on its turn, is organized through a set of subprograms (Asmus and Tagliani, 2012).

The institutional arrangement proposed for the implementation and execution of PLAM is composed by public and private institutions. The Municipal Environmental Departments are responsible for the coordination and execution of PLAM, having as a deliberative organism the Municipal Environmental Council (COMDEMA), which is constituted by representatives from the city government, non-governmental organizations, and society representatives.

A question to be considered is related to the doubt over the actual implementation and execution of the Municipal Environmental Plan. Although there are recent initiatives on the part of the local government, so far, PLAM has a managerial character, but no legal foundation – there is no municipal law to establish it as mandatory in governmental administrative actions. Without legal support, the plan depends on the political will of local managers, and may undergo low-priority periods with the government. Due to its considerable complexity and its multidisciplinary character, the execution of the plan often involves the joint work of several distinct governmental departments, such as tourism, housing, and environment; such requirement leads to restrictions on its appropriate operation. The sectorial actions are the ones with the most tradition with the local government. Integrated actions among government sectors are still difficult in the current conjuncture, as they demand an innovative way to establish the necessary governance to advance the programs. It would involve the establishment of a new culture of cooperation and integration within the government and among stakeholders; such culture has yet to be appropriately established in the region and could be considered similar for other sectors of the Brazilian coastal zone.

4. Conclusions

The historical and evolutionary aspect of PNRM is well characterized by the way in which it has been reviewed and implemented through successive sectoral plans for Sea Resources (PSRMs) (presently in its VIII version). Such evolution demonstrates the transition of Brazil's political landscape and its national priorities since the early 1980s. New principles have gradually been incorporated in the most recent plans. Examples of these principles are the integrated focus on sustainability in establishing targets of exploration of marine resources and an increasing national preoccupation with preserving marine and coastal biodiversity. Likewise, the National Plan for Coastal Management principles such as coastal management based on the characteristics of ecosystems and involving local communities have been included in its most recent version.

An example of evolution of the basic principles of Brazilian oceans policy is the involvement of institutions that elaborate, implement and evaluate it. In this respect, the role of CIRM (Interministerial Commission for Sea Resources) in the coordination and implementation of policy is important. CIRM, in addition to representing the various ministries that form it, is presided over by the Brazilian Navy through its Secretary (SECIRM). SECIRM is a unit with a traditional role related to the integration of Brazilian

territory rather than with aspects of sustainable development of the oceans. This decision by the Brazilian Government shows it is more focused on geopolitical principles than conservation in the establishment of its national oceans policy. CIRM, however, served in following years in an important role as a coordinating unit for marine policy and the various plans related to it. On the other hand, implementing the many sectoral plans of the policy involves an increasing variety of institutions with activities predominantly of environmental research and management. These institutions include the federal and state agencies for environmental control, universities and research institutes, and other representative groups in civil society. In this second phase, principles connected to community participation and sustainable development were gradually incorporated.

Information and knowledge constitute powerful instruments for change in the conception of values. But the direction for this change has to be “imposed” in a gradual way. The perspective that all the problems have a solution in the short term is unrealistic. The group work makes it easier and guides participants to the perception of more relevant problems. The solutions also need to be thought about and consensus reached within the group. It is useless having the government invest in progressive measures if the community does not get involved or support these initiatives. Identification of a shared long-term view, built together, might be the first step for initiating truly integrated management.

It is possible that, within communities themselves, there can be disagreements between groups. No hypothesis should be forgotten. This situation should be resolved by agreements, compromises or alliances that give priority to favoring the largest citizenship representation in the process. These processes include participation in making up the plans and public policies, as well as its execution and control.

Nowadays, public government cannot have the managing capacity to give immediate and effective answers that minimize problems at the local level. This limited capacity is a product of the horizontal authority between different parts of the government (secretaries, departments and other sectors). Also, national support organizations have a double function, that is, they finance and provide technical assistance to most cities. For this reason, the decentralization of initiatives and decisions at the national and local levels is recommended.

Despite Brazil has a National Coastal Management Plan based in a quite developed system of technical tools, a close look in its coastal management processes shows that they need a deep evaluation and to enhance the community participation. Although processes of community participation in integrated management actions have been consolidated in the international arena (Dereynier et al., 2010; Areizaga et al., 2012), the participation and empowerment of local Brazilians coastal communities have been constrained by a number of problems including financial restrictions, lack of capacity on a local level to handle responsibilities and conflicting priorities between stakeholders (Wever et al., 2012). Despite this situation, there are, recently, some interesting initiatives of the civil society by creating discussion forums and non-governmental organizations focused in the participatory political debate towards the sustainable use of the coastal zone (Scherer et al., 2011).

However, better connection between theory and practical actions through management systems evaluation procedures is essential for the adaptive management in the way for a sustainable development of the coast. The need for the implementation of

monitoring tools for the environment and for management processes is urgent, as well as the improvement of the available information and the better involvement of stakeholders that live, work and occupy in some way the coast. Hopefully, with the input of good suggestion and growing experiences, Brazil can substantially enhance its mode of coastal management, improving all aspects of participation of local coastal communities.

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