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## Participatory governance of Marine Protected Areas: a political challenge, an ethical imperative, different trajectories

Senegal case studies

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## Surveys

# Participatory governance of Marine Protected Areas: a political challenge, an ethical imperative, different trajectories. Senegal case studies.

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### Abstract

*The procedure for designating and establishing Marine Protected Areas (MPA) has changed profoundly since the 1990s, as a consequence of global changes and new dictates related to biodiversity conservation and sustainable development. Far beyond protection of flagship species such as marine turtles and large marine mammals, the goal is now to conserve and even increase the services associated with coastal ecosystems to the benefit of all stakeholders. References to community management of resources, territorial solidarity, or environmental justice have become common. The political processes undertaken have nevertheless taken a range of different trajectories, since the stakeholders (private, public, NGOs, local collectives) have different interests; their standards and rules are often incompatible; the efficacy of the negotiation process is debatable. In this article, after questioning the legitimacy of MPA (to what extent are they useful tools? —in responding to what aims?), the difficulties of putting into practice this new paradigm of participative governance is analysed and illustrated using three case studies of coastal Senegalese MPAs and the consequences of local intervention: the Saint Louis MPA, the Bamboung Community-Managed MPA in the Saloum Delta, and the Mangagoulack ICCA (Indigenous and Community Conserved Area) in Casamance. In conclusion, the principal lessons and perspectives of these approaches are presented.*



**Keywords:** biodiversity conservation; Marine Protected Area; local communities; participation; co-management; governance; spatial justice.

**Editors' note:** This paper is a revised version of a book chapter originally published in French by the IRD (Cormier-Salem, 2014, in press).

## TABLE OF CONTENTS

1. Introduction
2. Towards sustainable and shared governance of MPA: institutional articulations and coordination between stakeholders
  - 2.1 New paradigms
  - 2.2 A pioneer in MPA governance: Senegal
3. You use the term “Community-Managed” areas? From rhetoric to the reality on the ground
  - 3.1 Saint Louis MPA: an MPA on paper only?
  - 3.2 The Bamboung Community-Managed Marine Protected Area in the Saloum Delta: an exclusive preserve
  - 3.3 The Kawawana ICCA in Casamance: NIMBY
4. Conclusion: between participatory democracy and spatial injustice
5. References

## 1. INTRODUCTION

Despite an international consensus in favour of increasing the number of Marine Protected Areas (MPA) and enlarging them (Bonnin *et al.*, in press), controversy surrounds their effectiveness and legitimacy, especially in the context of developing countries. This is particularly true in Africa, a continent scarred by varying levels of conflict, ecological crisis, impoverishment and State disengagement (De Santo, 2013). In terms of their ecological effectiveness, questions are repeatedly raised concerning the minimal size, boundaries and configurations of MPA (Agardy *et al.*, 2011). In terms of their economic and social legitimacy, spatial and social justice and amenities for local communities are recurring issues (Potts *et al.*, 2014; Trimble *et al.*, 2014). According to Charles and Wilson (2009), it is possible to identify ten conditions that determine their success: attachment to place; high level of participation; effective governance; co-building of knowledge (scientific vs vernacular or local); the role of rights and customs; consequences of displacement of communities; costs and benefits; the place of the MPA in the larger region.

On the assumption that the resilience of socio-ecosystems owes less to the management of resources, strictly speaking, than to the governance of the regions, this article will focus on two of the points highlighted by Charles and Wilson, namely effective governance and participation, and the close links between them. What is “good” governance? Is participation by the local population effective? To what extent are the local or indigenous people key players in the governance of MPA? We will study the MPA policies implemented in Senegal. After considering the way concepts and management of the coastal areas and their resources have developed—from the creation of sanctuaries for flagship species to the co-management of MPA—we will explain why we regard Senegal as a pioneer in the adoption of these new paradigms, before analysing the problems and limitations inherent in operationalising these models. Three case studies will be used: the Saint Louis MPA, the Bamboung Community-Managed MPA in the

Saloum Delta and the Mangagoulack ICCA (Indigenous and Community Conserved Area) in Casamance.

Our mainly empirical methodology is based on a set of surveys conducted since 2005 along the West African coast, and Senegal in particular. Individual and group interviews were followed up by regular monitoring and contacts with Parks officials and protected areas and with local populations from 2009<sup>1</sup>. The purpose of these surveys was to identify and characterise the stakeholders involved in governance of the coastal area and their relationships with one another (decision-makers, managers, users, private and public operators, NGOs, scientists, *etc.*) and to gain an understanding of the knowledge, practices and institutions mobilised in this governance (values attributed to biodiversity, old and new systems of access and use, informal and formal agreements, standards and mechanisms) as well as conflicts and the methods used to resolve them, focusing not only on heritage-related, territorial and identity-related claims, but also old and new systems of mutual aid and alliance. Analysis of this empirical body of work is supplemented by theoretical consideration of concepts based on a bibliographical analysis of various written sources (from government reports to scientific articles). This article will not attempt to summarise these, since the subject is so broad and has given rise to numerous scientific works (Cormier-Salem, 2006a; Weigel *et al.*, 2007; Borrini-Feyerabend *et al.*, 2009b; Dahou, 2010; Touré, 2011; Lavigne Delville, 2011; Ingold, 2014).

## 2. TOWARDS SUSTAINABLE AND SHARED GOVERNANCE OF MPA: INSTITUTIONAL ARTICULATIONS AND COORDINATION BETWEEN STAKEHOLDERS

### 2.1 NEW PARADIGMS

The context has changed since the first marine sanctuaries were created to provide integral protection for emblematic species. New challenges have arisen, particularly in terms of the concept of sustainable development, which entered the media spotlight after the Brundtland report and was formalised at the Rio Earth Summit in 1992. Article 8 (j) of the Convention on Biological Diversity, concerning the problem of *in situ* conservation, recommends including consideration of “the knowledge, innovations and practices of indigenous and local communities”. This article has been on the agenda of all the Party Conferences since 1996. The reference to traditional ecological knowledge has become an intrinsic part of ecologically correct discussion. It goes without saying that the challenges are immense: “indigenous and local communities” are now seen as the primary beneficiaries of shared advantages. Links have been officially established between local practices, biodiversity conservation and sustainable management,

<sup>1</sup> These programmes were undertaken at the IRD (Institut de Recherche pour le Développement), the French Institute for Development Research, [www.ird.fr](http://www.ird.fr) in collaboration with the National Museum of Natural History, under the banner of a joint research unit (UMR) called “PALOC” (“Local heritages”, [www.paloc.fr](http://www.paloc.fr)). The programme was supported by the National Research Agency (ANR) for Biodiversity and the International Joint Research Laboratory (LMI) “PATEO” (“Water resources, patrimonies and territories”).

joining the many social science studies which criticised Hardin's theory and stressed the relevance of community management methods. As well as clear recognition of the right of communities to manage, *i.e.* to control the resources in their own region as part of a move towards governance, which is replacing co-management strategies (Berkes, 1989; Ostrom, 1990; Agrawal, 2005), cultural diversity is also recognised as a key aspect of biodiversity. Across the world, areas of megabiodiversity are often located in places where poor and marginalised communities live. The survival of these peoples and the maintenance of their practices appear to be essential components of diversity conservation (Posey, 1996). Accordingly, the identity and territorial claims of these minorities include a recognition not only of their cultural and political uniqueness but also of their privileged links with their environment and the associated biodiversity (Cormier-Salem & Roussel, 2002).

The evolving nature of these issues is clearly visible in the area of international negotiations. Was not the fight against poverty also the *leitmotif* of the Johannesburg Sustainable Development World Summit in August 2002, ten years after the Rio Earth Summit? Calls for equity and respect for cultural differences have been reiterated loud and clear. We have yet to ensure that these are put into practice.

With the way now open for the construction of local heritages, a number of practical, political and ethical problems arise. How can we preserve migratory species that do not recognise national borders, such as migratory birds or schools of fish? We need to acknowledge the multitude of local heritages and create a regional network of protection areas and corridors. Recognising that MPA are not islands (Janzen, 1983), all policies endeavour to one degree or another to factor in the ecological and social interdependencies underpinning these regional projects, as well as regional solidarities (Bonnin & Rodary, 2008; Mathevet *et al.*, 2010).

Although these concepts of solidarity (ecological/social/regional), environmental justice, shared governance, *etc.* are rapidly gaining ground, changes in standards of public action and particularly the level of acceptance of the MPA by local communities, recognition of local rules and agreements and the actual sharing of the advantages created as a result of biodiversity conservation are all open to question (see Nagoya Protocol; see MEA framework with reaffirmed links between the preservation of ecosystem services and the well-being of the populations; see ecotourism initiatives, promotion of local products, *etc.*).

When it comes to natural resources, in West Africa the pendulum has swung between centralised and decentralised, state and community, private, public and participatory management since the 1960s. Newly independent States took over from colonial administrations and reaffirmed ownership of so-called empty or common land. Since the 1980s however, numerous failures and conflicts caused by a lack of public services on the one hand and land tenure insecurity on the other have led to the implementation of new methods of collective

action (Blundo, 2002; Dahou, 2010; Lavigne Delville, 2011). Decentralisation and deconcentration policies aim to transfer the management of resources to the local communities, who are considered to have a vested interest in their preservation since they depend on them for their continued existence and are therefore in the best position to ensure compliance with the rules. The co-management of protected areas meets a requirement not merely for economic efficiency (principle of subsidiarity) and political efficiency (primacy of social control over administrative control), but also social justice, restoring the rights of the communities and ensuring that they receive an equal share of the benefits derived from nature. Over and above the consideration of the territorial and identity claims of the local communities, governance, which has gone hand in hand with sustainable development since the 1990s, is a system of institutional articulations, negotiation and conflict resolution (Cormier-Salem, 2007). Participation in governance encompasses various concepts, which often overlap but are nevertheless very different in terms of collective decision processes, ranging from simple consultation to coordination and negotiation (Thouzard, 2006). These methods are implemented at different spatial-temporal levels, mobilise different players, and occur in different stages. These terms often slot together or succeed one another as the process develops. According to Mermet (2012), negotiation is "a decision system in which players who are interdependent but have different interests or views engage in dialogue in order to seek a mutually agreeable solution." We will examine the operability of this definition and these new models based on the coastal biodiversity conservation policies in place in Senegal.

## 2.2 A PIONEER IN MPA GOVERNANCE: SENEGAL

In Senegal, as in the rest of the world, the first MPA fulfilled a pressing need to protect so-called heritage animal species included on the IUCN red lists and in several international conventions, such as the 1979 Bonn conventions on the protection of migratory species (avifauna, ichtyofauna and marine mammals) and the habitats that shelter them, mangrove swamps to the fore. The first Senegalese coastal areas (there are no marine areas as such) to be classified, in 1971, were migratory bird habitats. Initially Ramsar sites, they later became a UNESCO Biosphere Reserve (Saloum Delta with Bird Island in Senegal) and National Parks (Barbary Spit and Djoudj in the Senegal River Delta and Madeleine Island off Dakar) (see Figure 1) (Cormier-Salem, 2006a).

This sanctuary approach, focused on one element of biodiversity, was followed in the 1990s by so-called ecosystemic and regional approaches, "anchored in the local way of life" (Cormier-Salem & Roussel, 2002): in accordance with the Biodiversity Convention, ratified by Senegal, notably Article 8J concerning recognition of the knowledge and traditions of indigenous communities. Given the specific context of West Africa, where 60% of the population live near the coast and fishing and seaside tourism are hugely important, it is recognised that coastal biodiversity must be preserved both with and for local users. The ecoregional approach that developed during the 1990s appears to be

the most appropriate way to manage not only migratory species (mullet, sharks, sea turtles), but also the fishermen who migrate at this level. Nor should fishermen any longer be unilaterally regarded as predators or pillagers, but as responsible producers involved in the governance of their region.



Figure 1: Location of the three MPA on the Senegalese coast. CMA=Community-Managed MPA. [Sources: DivaGIS, GoogleEarth, GRDR<sup>2</sup>, DPN, IRD. Graphic by M.-C. Cormier-Salem and M. Fabre, UMR PALOC, IRD.]

Government services, the DPN (National Parks Department) to the fore, organised consultation workshops between all the stakeholders in the supply chain, including the Saint Louis workshop in Senegal in May 2000 on the management and conservation of shark populations. At Nouakchott in February 2002, a workshop on MPA as fishing regulation tools brought together representatives from the various stakeholder groups with an interest in MPA (decision-makers, MPA managers, NGOs, professionals, experts and scientific researchers, etc.) in the countries belonging to the SRFC (Sub-Regional Fisheries Commission). Set up in 1985, the SRFC initially had six members: Cape Verde, Mauritania, Senegal, Gambia, Guinea-Bissau and Republic of Guinea, with Sierra Leone joining at a later date. A Regional Conservation Programme for Marine and Coastal Areas (PRCM<sup>3</sup>) was then launched under the auspices of the SRFC and with support from the IUCN, WI, WWF and FIBA. Its remit was to formulate action plans on sea turtles and sharks (Cormier-Salem, 2006b).

2 In French, *Groupe de Recherche et de Réalisation pour le Développement Rural* (Research and Action Group for Rural Development).

3 In French, *Programme Régional pour la Conservation des zones Côtières et Marines*.

This workshop was tasked with formulating a coordinated strategy for the sub-region, which was submitted to the Council of Ministers of the SRFC in March 2003 in Dakar, and then presented in September 2003 in Durban (South Africa) at the 5th IUCN World Congress on Protected Areas. Under the strategic guidelines of the Environment section of NEPAD and the commitments made at this Congress, the Senegalese government created five new MPA by Presidential decree of 4 November 2004 (see Table 1) and set up a regional network of MPA (RAMPAO), harnessing the experience of the PRCM and other joint initiatives, including the Senegal-Mauritania Biodiversity Project and UNESCO's AfriMAB<sup>4</sup> Network (Cormier-Salem, 2006a).

Its resolutely sub-regional strategic positioning aside, Senegal promoted a participatory approach very early on. The number of community reserves increased, although they had very different statuses: some were co-managed with the Government (through the DPN, the DEFCCS or PGCRN<sup>5</sup>), while others were supported by local associations such as Popenguine, on the Petite Côte, in partnership with the IUCN, and then the Senegalese NCD Association (Nature Community Development). In this connection, it is significant that Macky Sall's government (March 2012) created a Ministry of the Environment and Protection of Nature with a Community Marine Protection Area Department, a clear indication of the shift in public policy.

### 3. YOU USE THE TERM "COMMUNITY-MANAGED" AREAS? FROM RHETORIC TO THE REALITY ON THE GROUND

Although the number of so-called community-managed reserves is steadily growing, what role does civil society play in their governance? How does power sharing work in practice? We will analyse the problems and limitations of the various participation methods based on three MPA in Senegal, chosen according to a north-south divide, from the Senegal Delta (Saint Louis MPA) to the Saloum Delta (Bamboug MPA), then to Casamance (Mangoulack ICCA) (see Figure 1). Although this article focuses on the internal contradictions of these strategies, we should also highlight on the one hand the avowed desire to promote innovative instruments of collective action and on the other the power games played between stakeholders that happen in all societies and extend beyond the framework of the MPA, revealing equal levels of complexity and conflict.

#### 3.1 SAINT LOUIS MPA: AN MPA ON PAPER ONLY?

Created by Presidential decree of November 2004, the Saint Louis MPA, covering a total area of 496 km<sup>2</sup>, is the largest in Senegal and responded to the need to repopulate the seabeds alongside one of the country's main fishing grounds and to

4 A network within UNESCO's Man And Biosphere programme, focussing on Africa.

5 DPN: National Parks Department; DEFCC: Water, Forest, Hunting and Soil Conservation Department; PGCRN: Natural Resources Community-Managed Management Project.

Table 1: Overview of the Senegalese Marine Protected Areas network.

Protected areas	Surface area	Interest from biodiversity perspective
Somone Nature Reserve of Community Interest (RNICS), created in 1999.	700 ha	Highly diversified avifauna including: spoonbill, pelican, cormorant, egret, curlew, sandpiper, etc.
Palmarin Community Nature Reserve (RCP), created in 2003.	10,430 ha	Reproduction site for sea turtles, striped hyena, jackals, monkeys, very important avifauna.
Bamboung Community-Managed Marine Protected Area, created in 2004.	7,000 ha	Spawning and feeding grounds for ichthyofauna, manatees, dolphins and sea turtles.
Saint Louis Marine Protected Area, created in 2004.	49,600 ha	Sustainable protection and conservation of fisheries.
Cayar Marine Protected Area, created in 2004.	17,100 ha	Protection of sites of special interest for maintaining and renewing fishery stocks in and around the conservation area.
Joal Fadiouth Marine Protected Area, created in 2004.	17,400 ha	Spawning ground and reproduction site for sea turtles.
Abene Marine Protected Area, created in 2004.	11,900 ha	Sustainable protection and conservation of fisheries.

Source: Website of the Ministry of Ecology and Protection of Nature (4 March 2013).

keep foreign trawlers away (see Figure 2). The populations directly affected by this MPA are an homogeneous group despite their different fishing methods. They are all Wolof who live on the island of Guet Ndar, a district of Saint Louis comprised solely of fishing families, known as Guet Ndariens, who have a deep attachment to their community and are bound by strong family ties. We applaud the avowed desire of the Government and its departments to involve the Guet

Ndariens in the various stages of the process, from choosing the MPA site to defining the management plans. However, significant challenges and problems specific to this complex region emerged when the initiative was implemented. The first constraint, mentioned by all the stakeholders, was the obvious lack of space (see Figure 3). The Guet Ndar district is located on a narrow sandy spit, the Barbary Spit, which is vulnerable to sea erosion and one of the most densely

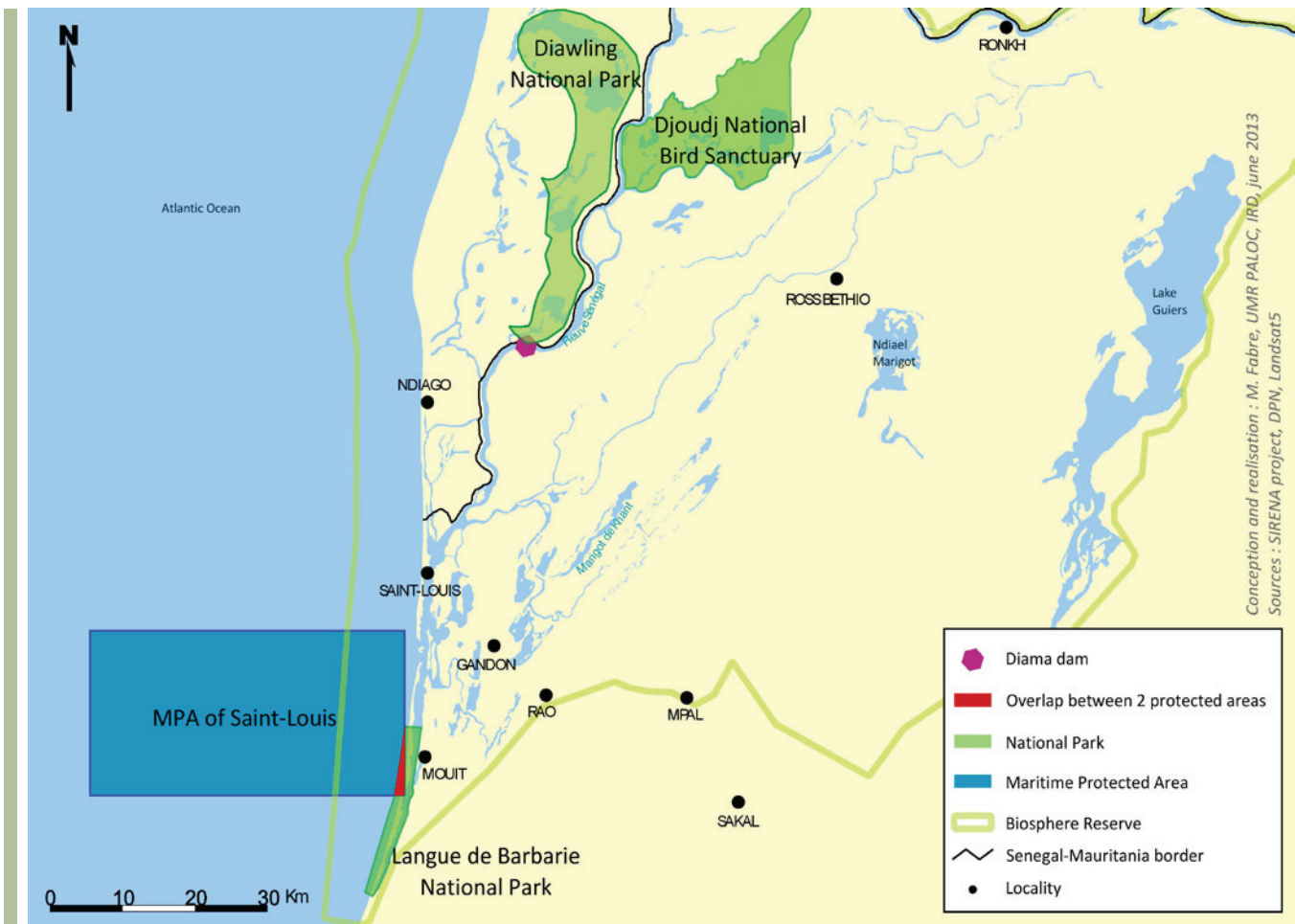


Figure 2: The Saint Louis MPA in the Senegal River Delta Transborder Biosphere Reserve. (Sources: SIRENA Project, DPN, Landsat. Graphic by M.-C. Cormier-Salem and M. Fabre, UMR PALOC, IRD.)

populated communities in Senegal (160,000 inhabitants per km<sup>2</sup>). The steady increase in the number of fishermen has led to a high building density (traditionally there are no two-storey houses in this district) and put growing pressure on fish resources against a general background of fish depletion and competition for access both to fishing zones, especially between small-scale fishermen, trawlers and shrimpers, and to landing stages, between fishermen, fish wholesalers and fish processors (Aziz, 2007; surveys carried out by the author, 2009-2014).

The choice of the MPA site, opposite the Guet Ndar district and directly adjacent to the new River mouth, was contested on both physical and human grounds: the site was rich in shrimp and demersal species, but was dangerous and had become the only route by which canoes could put to sea. The drilling of the “relief canal” on the Barbary Spit in 2003 initially enabled fishermen to unload their catches along the banks of the Senegal River, sheltered from the swells, downstream of the bridge connecting Saint Louis island to Guet Ndar, instead of on the beach along the Atlantic. Subsequently, the strong coastal dynamics, characterised by sea erosion, particularly to the south of the river mouth (two new breaches occurred in September 2012), combined with endlessly shifting sandbanks, made navigation very hazardous and led to frequent canoe accidents (see Figure 4). The coastal and marine areas are steadily contracting, while Senegalese fishermen are denied access to the Mauritanian waters further north.

A second major constraint concerns the overlap between the territories of the MPA and the Barbary Spit National Park (PNLB) on the one hand and the Senegal River Delta Transborder Reserve (RBDTS) on the other, which have different statuses and powers. The PNLB, created in 1976, originally covering an area of 800 ha and increased to 2,000 ha in 1977, stretches to the southern bank of the Senegal River (see Figure 2). One-fifth of its area (350 ha) overlaps with the MPA. Protection is integral in the PNLB, while in the MPA, usage and access rights vary according to zone, season and fishing gear. In principle, the MPA is the buffer zone for the Park. There is no coordinating body between the two protected areas, and the PNLB warden does not sit on the MPA management committee.

The Senegal River Delta, shared between Senegal and Mauritania, was added to the UNESCO MAB (Man and the Biosphere) list<sup>6</sup> on 27 June 2005. However, only one-third of the Saint Louis MPA lies inside the RBDTS, with the remainder in international waters. Furthermore, the MPA is strictly Senegalese (see below). The status of this MPA should be clarified, or even revised, to ensure consistent management of this stretch of coast, which could form one of the three management units of the RBDTS (Borrini-Feyerabend & Hamerlynck, 2010). This overlap between protected area

territory is exacerbated by the partitioning of management structures and the conflicting prerogatives of Government departments, notably the DPN and the Fisheries Department.



Figure 3: Guet Ndar beach and district in Saint Louis. (Photo: M.-C. Cormier-Salem.)



Figure 4: Dramatic coastal erosion: the village of Doun Baba Gueye in ruins. (Photo: M.-C. Cormier-Salem.)

A third problem concerns the random nature of the MPA boundaries. The rectangle delineated on the official location maps reveals the lack of any bio-ecological or social basis; the northern boundary corresponds to the Senegal-Mauritania land border extending straight into territorial waters. Faced with the impossible task of implementing the limits of the MPA, a single (very small) zone was marked out (not until October 2010) at the mouth of the river, on the southern bank, and thus in the local waters of the PNLB. Four markers were positioned to indicate the limits of the zone considered to be the richest, namely rocky seabeds or *kher*. This site was chosen based on the knowledge of the old fishermen; consideration of this “traditional” knowledge is highlighted by MPA personnel to underpin their strategy of participatory governance. However, strong tides caused one of the markers to disappear very quickly. Here again, the comments of the fishermen were highly critical: the markers were placed too close to the coast (16-22.5 km) and in a PNLB zone where fishing is permitted, just to the south of the new mouth of the Senegal River, the fishermen’s obligatory route out to sea. This area of sea is also extremely rough.

<sup>6</sup> Inscription on such a list is the formal procedure for recognising the remarkable nature of an area and attributing it a protected status at an international level. A state such as Senegal has to elaborate a consistent report to justify this inscription and give guarantees they will respect their duties for protecting this area.



The last problem relates to a lack of understanding between stakeholders. Despite the avowed desire for a participatory approach voiced at the big awareness raising and information meetings organised by the Northern National Parks Information Office (BIPNN), a decentralised public body of the DPN, and the resources invested with a view to making campaigns sustainable (funds from WWF, FFEM<sup>7</sup>, FAED<sup>8</sup>, etc.), the MPA appears to have been set up hastily, demanding acceptance from local stakeholders without any true negotiation. Apart from confusion about the status of the various protected areas in the area (between MPA and National Parks in particular), the main stakeholders, namely canoe captains and seagoing fishermen, were the big losers in terms of the consultation process. This lack of participation by socially disadvantaged populations and those who make their living from the sea (often the young) was also apparent both at the coordination meetings prior to the creation of the MPA and in the management bodies, namely the annual general meeting and the management committee. The latter, set up in 2007 and chaired by a well-known old fisherman, had great difficulty renewing its mandate in December 2010, as numerous conflicts relating to the legitimacy and representativeness of its members emerged. Furthermore, the lack of scientists, Government and Fisheries Department representatives raised questions about the committee's ability to monitor and coordinate the management plans. A case in point was the innovatively designed artificial reefs. These were manufactured from sand and cement by local craftsmen based on traditional knowledge to attract octopus and shrimp, but ultimately came to be seen as a very expensive PR exercise devoid of any real local benefit.

Lastly, to say nothing of the problems experienced when implementing the initiative due to the lack of infrastructure and Fisheries surveillance post equipment<sup>9</sup>, the MPA caused heightened tensions with the Guet Ndarien community. According to our own surveys (2011 and 2014), the majority of fishermen objected to the MPA in a very tense atmosphere compounded by restrictions on fishing trips, a long hiatus in the distribution of permits allowing Senegalese fishermen to fish in Mauritanian waters and a rotation system for fishing trips (alternate days) in a bid to limit pressure on Senegalese waters. The opinions of the fishermen appeared to vary however depending on their fishing methods. According to Aziz (2007), driftnet and line fishermen were the most strongly opposed to the MPA owing to their lack of options: fishing was all they knew and they could only fish in the MPA. Fishermen using purse-seine nets did not believe the MPA was a suitable vehicle for managing the mobile (deep-sea) fisheries shared with Mauritania. They wanted access to Mauritanian waters and stressed the positive role of the MPA in prohibiting trawler access to the area in particular. The position of fishermen who go on long fishing trips in their ice canoes or work with fish collection boats (their canoes are towed by the boat owners,

enabling them to reach rocky seabeds remote from the coast and inaccessible to trawlers) was more ambiguous. Since they only pass through the MPA, they had no interest in it and did not object to total protection of the coastal habitats, which would enable the seabeds to be repopulated.

### 3.2 THE BAMBOUNG COMMUNITY-MANAGED MARINE PROTECTED AREA IN THE SALOUM DELTA: AN EXCLUSIVE PRESERVE

The Saloum Delta, site of Bamboung Community-Managed MPA, comprises three sea inlets: Saloum to the north, Diombos in the centre (of which the Bamboung belong is a tributary) and Bandiala to the south. In order to understand the distinctive nature of this MPA, it is necessary to define its environment as per Charles and Wilson (2009), in other words its socio-spatial characteristics, since this territory is so strongly disputed and its assets are the subject of contradictory claims (Cormier-Salem, 2000, 2006; Dahou & Abdel Wedoud, 2007; Dahou, 2008).

The first factor to consider is the heterogeneous nature of the rural communities and the diverse range of resource management strategies and practices. Schematically, the islands between Saloum and Diombos, which make up Gandoul, are inhabited by Serer Niominka, very early specialists in navigation and sea fishing. They are (full-time) professional fishermen who travel long distances and stay in fishing stations in the Delta or outside the Delta (in Casamance, Guinea Bissau, etc.) for months or even years at a time. These islands have seen a mass exodus of young people, who were some of the first to attempt the hazardous crossing to Europe by canoe. These migrations have complex repercussions in terms of lineage solidarity and social and economic recomposition (analysis of which exceeds the scope of this chapter, see Dahou, 2008; Cormier-Salem *et al.*, 2010). The islands between Diombos and Bandiala, Betanti and Niombato, are mainly inhabited by Soce, natives of Gabou (consequently close to the Manding) and still largely farmers (Cormier-Salem *et al.*, 2010). The Rural Community of Toubacouta, where Bamboung MPA is located, contains large numbers of foreigners who have settled there over the years. Among them are Jola palm wine growers, Malian and Burkina Faso fish smokers, Lebou fishermen, Wolof traders, French tourist operators, etc.. Unlike Guet Ndar, the community includes a wide variety of "local" stakeholders, of different origins, activities and statuses.

The second factor to consider is the overlap of protected areas that have different statuses (see Figure 5). The Saloum Delta National Park comprises the Fathala forest and islands and islets partially colonised by mangroves. When it was created in 1976, it covered 76 km<sup>2</sup>. In 1981 the protected area was extended to 180 km<sup>2</sup> and classified as a Biosphere Reserve based on the UNESCO model, containing three zones (central, peripheral and buffer). The Saloum Delta National Park is the central zone of the Biosphere Reserve of the Saloum Delta (RBDS). The RBDS was added to the list of Ramsar sites in 1984. It covers an area of between 240 and 260 km<sup>2</sup>, the

<sup>7</sup> French Global Environment Facility (in French, *Fonds Français pour l'Environnement Mondial*).

<sup>8</sup> Fund Supporting the Environment and Development (in French, *Fonds d'Appui à l'Environnement et au Développement*).

<sup>9</sup> At the time of our visit, none of the surveillance post equipment was working – neither the radars and radios nor the patrol boat.



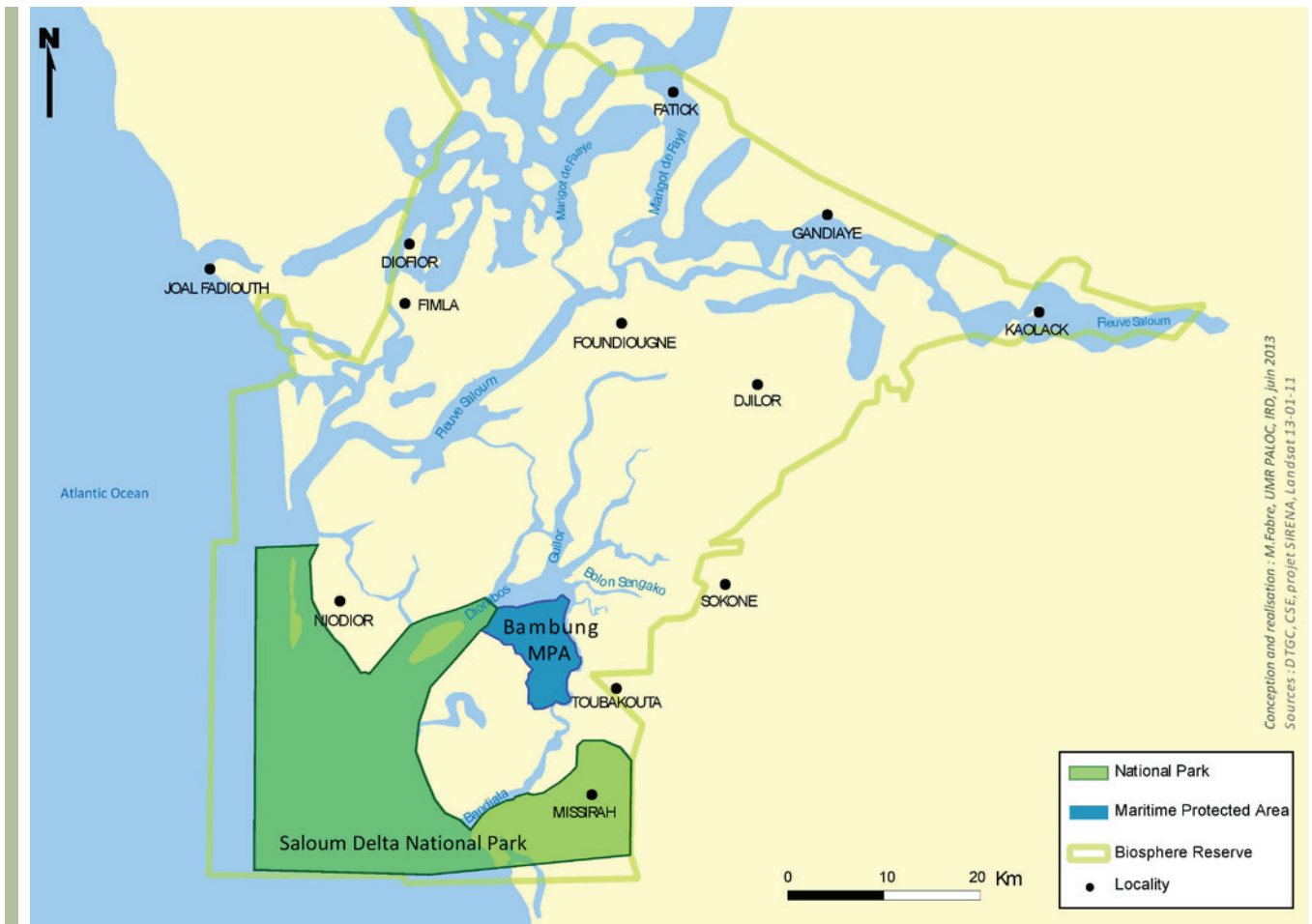


Figure 5: The Bamboing Community-Managed MPA in the Biosphere Reserve in the Saloum Delta. (Sources: Directorate of Geographic and Cartographic Works, Senegal; Centre for Ecological Monitoring; SIRENA Project; Landsat. Graphic by M.-C./ Cormier-Salem and M. Fabre, UMR PALOC, IRD.)

boundaries of the protected land areas being somewhat fluid (Cormier-Salem, 2006). Finally, the Saloum Delta was added to UNESCO's list of world heritage sites in 2011. This rush towards heritage preservation coincided with an overlap of powers between Government departments, which as in the case of Saint Louis, led to legitimacy conflicts, exacerbated by the amphibian nature of the environment. The 1962 National Domain Act for example transferred ownership of the marine environment and control of fishing activities to the DPN (Cormier-Salem, 2000). This also coincided with the hijacking and monopolisation of public funds for private purposes, as shown by the proliferation of tourist camps and associations, NGOs, management committees, beach committees, etc. and other operators seeking a "green" windfall. Whether one criticises the non-governmentality or under-administration of these MPA (Nguingui, 2003) or their "over-government" (Diallo, 2012), the multiplicity and incompatibility of the legal and regulatory references in the RBDS (Dahou & Weigel, 2005) or the hybridisation of the rules of access and use (Diallo, 2012), there can be no doubt that coordination between stakeholders is extremely difficult due to the large number of institutions involved, and the creation of a community-managed integral reserve like Bamboing MPA is a real challenge.

Created by the same Presidential decree of November 2004

as the Saint Louis MPA, the Bamboing MPA, covering an area of 70 km<sup>2</sup>, led to the closure of the Bamboing belong, which forms the central integral protection zone of this area. The MPA is bounded to the north by the Diombos sea inlet, and to the south by the Diogaye and Kabaye forests. It was initiated and driven by a Senegalese marine environment protection association, the Oceanium Dakar, as part of the *Narou Heuleuk* project, and funded by the FFEM. The site, a known spawning and feeding ground for many estuarine species (ichthyofauna, manatees, dolphins, sea turtles), was chosen by a team of biologists who were also put in charge of monitoring it. The MPA was created following a consultation process involving fourteen villages in the Toubacouta Rural Community; from the outset the aim was to promote income-generating activities for these villages by establishing an ecotourist camp, Keur Bamboing, and recruiting and training eco-guards and eco-guides from each village.

Although the locally elected representatives of this villages clearly supported this initiative, the same could not be said for the population as a whole, especially the women trading in shellfish who believed that the fruits of the mangrove swamps (oysters, ark clams, *yeet* and *Cymbium*) would rot unless gathered; nor the Niominka fishermen from the Gandoul islands (villages of Bassul, Diogan, etc.) who "traditionally"

set up camp in this area and for whom the bolong was a favoured fishing location (see Figure 6). Thus, unlike the Saint Louis MPA, governance in Bamboung MPA is participatory but exclusive, *i.e.* solely benefiting the villages along the Bamboung bolong, although these villagers are not indigenous and do not form a homogeneous group (*e.g.* the village of Sippo includes Soce, Jola, Bambara, Wolof, many of whom are not indigenous but assimilated or living together in harmony). The “enclosure”<sup>10</sup> of the Bamboung bolong was condemned by the professional Niominka fishermen, who regarded themselves as the only true indigenous population. Ethnic one-upmanship was compounded by legal one-upmanship (Dahou & Abdel Wedoud, 2007), as the Niominkas’ “right of the axe” (or first farmers) clashed with the right of the original Soce inhabitants. The permanent or temporary closure of the Bamboung bolong was a further bone of contention: apparently some villagers initially accepted the closure because they thought it would only be temporary. Others deliberately chose the Bamboung bolong to protect their resources and preserve them from outsiders, be they neighbours or foreigners. Given the previous and now renewed abundance of fish in this site following its biological rest period, there is now no question of re-opening it. Opening the bolong for shellfish collection is the only option that might be considered.



Figure 6: Local governance, an uncertain pathway to participatory democracy: a bridge in the Saloum Delta. (Photo: M.-C. Cormier-Salem.)

Another issue of a more ethical nature concerns the eco-tourist camp at Keur Bamboung, which is based less on fair tourism than tourism “in” nature. The camp is not self-managed by the villagers. The local economic benefits are limited, most of the few jobs it provides (around twenty in total) being menial positions (cooks, maids, oarsman, excluding the volunteer eco-guides and eco-guards who are paid at the end of the mission), while the estimated population of the fourteen peripheral villages which joined the MPA is 30,000. It is surprising that besides canoe and kayak excursions into the mangrove swamps and nature trails through the bush, the open air activities on offer also include recreational fishing.

<sup>10</sup> This very strong term, used by the president of the association of women who gather shellfish in one of the villages in Gandoul, condemns the land privatisation promoted by the Bamboung MPA.

Tourists are granted rights that are denied to the locals, even to cater for their own fish consumption (Sarr *et al.*, 2009).

Lastly, the lack of transparency in the management of the MPA and in particular the unequal distribution of the camp profits serve to heighten tensions: following the general meeting held in Toubakouta in December 2013, a steering committee was set up to clarify the status of this MPA; the mandates of the management committee officers were renewed, with broad representation of all the stakeholders. This should facilitate communication between the bodies and make coordination easier.

### 3.3 THE KAWAWANA ICCA IN CASAMANCE: NIMBY!

The establishment and governance of the Community Conserved Area (ICCA) of the Rural Community of Mangagoulack, known as Kawawana<sup>11</sup>, are very different from those of the other MPA. Kawawana was created on the initiative of an association of fishermen in this RC, supported by the American NGO CENESTA (GEF funding) and FIBA<sup>12</sup>, which funded the “Kawawana on the move!” study conducted by scientists and Oceanium, all active supporters of the concept of participatory biodiversity conservation (Borrinni-Feyerabend *et al.*, 2009a). Kawawana is an institutional innovation that officially recognises ancient rights of use and access to the bolongs and spaces of amphibian areas (Cormier-Salem, 1992).

It was created in 2004 by a decree of the governor of Ziguinchor province after a lengthy process of application for official recognition (the file was submitted four times). The governor attended the plenary session as well as visiting the various regional technical departments (which were permitted to have their say). The decree only came into force after ratification by the Fisheries Department. The regional council order establishing Kawawana made provision for the transfer of skills. However, Kawawana is not co-managed with the State and its departments: it is an independent organisation that carries out surveillance and ensures compliance with bans, but cannot apply sanctions. Some fishermen have received training from the Fisheries Department but are not certified; if they catch offenders red-handed, they have to take action through the officials of the Fisheries department.

The Kawawana association of fishermen had 135 members in 2004 and 200 in 2011. It is made up entirely of Diola fishermen from the Mangagoulack Rural Community, which includes eight villages (Boutène, Affiniam, Diattok, Tendouck, Boutegol, Mangagoulack, Elana and Bode) and one hamlet (Djilapao). It is headed by Salatou Sambou, president of the community association of Mangagoulack RC, who hails from the village of Mangagoulack.

<sup>11</sup> KAWAWANA is the acronym for *Kapoye Wafwolale Wata Nanang*, a Diola expression meaning “Our heritage, for us all to preserve.”

<sup>12</sup> International Foundation of the Banc d’Arguin (in French, Fondation Internationale du Banc d’Arguin).

Unlike Bamboug, which is more or less enclosed and continuous, Kawawana is not a delineated area, but has been zoned to follow the outline of the bolongs (see Figure 7). Three zones were defined, symbolised by colours (red, orange and yellow). Usage rights subject to varying levels of restrictions and *ad hoc* sanctions were assigned to each (ranging from warnings through seizure of equipment and produce to fines). The central yellow zone—the Tendouck bolong, an essential transport route between Ziguinchor and the villages of Boulouf—has the fewest restrictions. Fishing with outboard motors, fishing with non-selective or illegal equipment such as monofilament nets, and the gathering of green timber are all banned, while the transport of people and goods (timber, fish, etc.) and the gathering of oysters and deadwood are permitted. In the eastern or orange zone, the many-branched bolongs of the villages are an important farming area for the residents of the RC (timber, oysters, salt, fish). In addition to the practices banned in the yellow zone, it is also forbidden to sell fishing produce outside the villages of the RC. Only residents of the RC are permitted to gather and freely sell oysters and deadwood; foreigners are also permitted to fish subject to obtaining authorisation through a warden who must inform the chief of the village in which the fisherman intends to set up camp. The western or red area corresponds to the Mitij bolong, which is a sacred bolong where activities of any kind are strictly forbidden (see Figure 7).

With regard to governance, Kawawana has five bodies: the board of Kawawana, the general meeting of the ICCS (at which all categories of the Mangagoulack Rural Community are represented; over 150 people attended the last meeting in June 2011), the Council of the Mangagoulack Rural Community, a Council of Elders and a scientific advisory committee. Decisions are taken by the meeting rather than the president.

It emerged from our conversations with the association of fishermen and from surveys conducted outside the zone that at present Kawawana is a model worthy of emulation. Besides conserving the mangrove and its resources, it has improved social well-being, to the extent that there are now fewer conflicts between fishermen. Indeed, the rules defined and observed by Kawawana are even respected by fishermen from outside, such as those from the Batine district of Thionk-Essyl who can come and fish in the Tendouck bolong provided they sell their catch to the Mangagoulack RC. Above all, since priority is given to local consumption, fish stocks are more abundant and supplying the population of the Rural Community is less expensive, thus resulting in a better diet for everyone.

Nevertheless, certain limits to the Kawawana model have been suggested: firstly, the approach is still too sectoral: the management plans only cover fishing and exploitation of the bolongs, rather than the territory as a whole, despite the fact that all the stakeholders are supposed to be involved (traders, farmers, oyster collectors, rice growers). Secondly, not all the stakeholders participating in the governance of the Mangagoulack Rural Community are involved in the Committee, including the people living in the villages outside the bolongs and the Fisheries Department officials. This leads

to conflicts of legitimacy between Kawawana and the State departments. Thirdly, the personalisation of Kawawana with its president called into question over its longevity. Lastly, since the ultimate aim is to halt the mass exodus of young people, an age-old phenomenon that has been exacerbated by insecurity and several years of civil war, activities need to be diversified still further. Clear interest has been expressed in processing plants (smoking, drying), on-site marketing to promote local industries, one or more eco-tourist camps and, lastly, saline solar ponds.

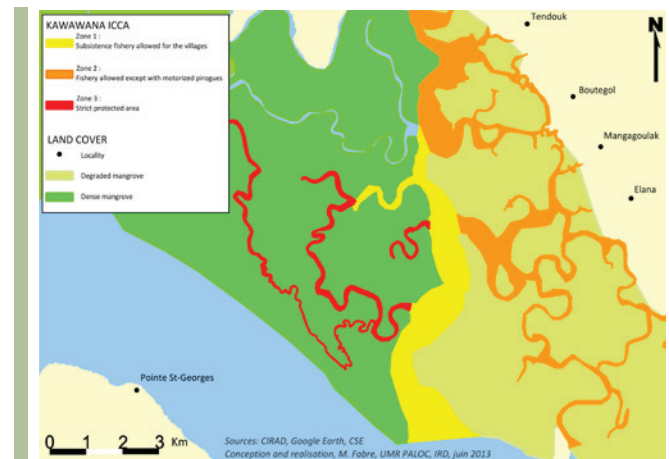


Figure 7: The Kawawana ICCA in Casamance. (Source: Borrini-Feyerabend *et al.*, 2009a, CIRAD, Google Earth, CSE. Graphic by M.-C. Cormier-Salem and M. Fabre, UMR PALOC, IRD.)



Figure 8: Even the *busana*, the small dugout canoes of Casamance, are controlled and licensed. (Photo: M.-C. Cormier-Salem.)

Other Rural Communities (Thionk-Essil, Tiobon, Bandial, Petit Kassa, Tobor, etc.) are interested in adopting a similar approach, but there is a case for questioning whether transferring this model is appropriate, particularly in terms of territorial solidarity. Increased local recognition of territories and heritages could lead to partitioning, land enclosures and a withdrawal into communities. “Non-indigenous” people, ejected from community land, will have no choice but to restrict their fishing to “non-heritage” areas and species, a state of affairs aptly summed up by the widely used term NIMBY (Not In My Back Yard).



#### 4. CONCLUSION: BETWEEN PARTICIPATORY DEMOCRACY AND SPATIAL INJUSTICE

Protected marine areas, regarded by some as fishery management tools, by others as maintenance tools for ecosystem services and by yet others as instruments of regional governance, continue to divide opinion among scientists, managers and decision-makers concerning their appropriateness. This term encompasses notions of effectiveness and legitimacy (ecological, economic and social) and has led to the promotion of “community-managed” MPA in a bid to make them acceptable. In fact, sustainable management of resources or reasonable use of the environment’s natural diversity is less important than local governance and the regulation of social relationships (Weber, 1996). As the three community-managed MPA in Senegal (Saint Louis, Bamboung and Kawawana) demonstrate, the definition of “good” governance is open to question. The strategies implemented in Senegal highlight the diverse methods used to encourage participation by “local” stakeholders (from coordination to negotiation, membership and decision-making) and the trajectories of governance. Apart from the limitations already discussed and specific to each case studied, it is clear that in the end, decision-making remains the prerogative of certain individuals, leaders or “important people” whose legitimacy is based on their knowledge and more importantly, on their religious, economic or sociopolitical power. The heightening of tensions (between groups and categories of stakeholders) and the onset of power games following the emergence of new stakeholders (heritage mediators) and new networks (via NGOs) indicate the problems associated with the transition from State management to local governance and explain the current tendency to return to centralised management and privatisation of resources or enclosure of land. In the context of developing countries (disengagement from the State, impoverishment and rising inequalities, difficult balance between global and local standards, etc.), there is a case for questioning the place of participatory democracy in public policies on regional development. We may well cast a critical eye over the new methods of collective action, but that should not stop us welcoming the innovations (technological, institutional, economic, legal) they bring with them and the mobilisation of stakeholders in new arenas. These factors may indeed reveal or even exacerbate conflicts, but they also enable knowledge to be shared, rules to be redefined and social connections and networks to be reactivated (Beuret & Cadoret, 2010; Ostrom, 2011).

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