

# User rights-based management in Cote d'Ivoire and Senegal: aligning national policies to the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS)

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## **Abstract**

African Union has considerable concern for the status of the fisheries sector in Africa, particularly the small-scale fisheries as demonstrated in the Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa (PFRS). This blueprint for African fisheries management and aquaculture development highlighted the “adaptive management” to suit local circumstances, but strengthened environmental sustainability including co-management, rights-based approaches. As a result, the countries moved from open access to user rights-based fisheries. This is a key element to increasing social benefits from the sector, without destroying the resource and marine habitats. Along these lines, the member states of the African Union support the promotion of User Rights Fisheries through substantial awareness and capacity-building campaigns. These campaigns facilitate the understanding and implementation of the various approaches in rights-based fisheries management, including territorial use rights fisheries (TURFs) and rights to harvest a certain fraction of the allowable catch. Our paper is based on two case studies on the alignment of national policy to the PFRS, looking at the various user rights-based fisheries management in Cote d'Ivoire and Senegal, fish deficit and fish export countries respectively.

## **1. INTRODUCTION**

The African Union has considerable concern for the status of the fisheries sector in Africa, particularly the small-scale fisheries as demonstrated in the PFRS (AUC-NEPAD, 2014). This blueprint for African fisheries management and aquaculture development highlighted the “adaptive management” to suit local circumstances while strengthening environmental sustainability, including co-management, rights-based approaches. This resulted in the countries’ move from open access fisheries to user rights-based fisheries. This move is key to increasing social benefits from the sector without destroying the resource and marine habitats.

The member states of the African Union support the promotion of User Rights Fisheries through substantial awareness and capacity-building campaigns to facilitate the understanding and the implementation of the various approaches in rights-based fisheries management including territorial use rights fisheries (TURFs) and rights to harvest a certain fraction of the allowable catch.

In West Africa, there are different fisheries governance approaches, depending on fishing community involvement in decision-making. Cote d'Ivoire and Senegal are shifting from the dictator-like, top-down approach, to a more participative and inclusive way of performing fisheries governance.

A notable damaging of biomasses and loss of economic value due to the very high proportion of small size fish in the catch accompany overexploitation. This situation is made worse by illegal, unreported and unregulated fishing (IUU) that, besides the thinning of fish stocks, destroys marine habitats and weakens the inshore communities. The IUU fishing in particular costs West Africa more than USD 1 billion per year<sup>1</sup>. In 2006, Michael Fleishman already announced that deepwater fish stocks off the West African coast (at

depths exceeding 400 meters) had decreased by half since 1970. Like sea fishing, continental fishing in Africa has seen the number of catches decrease. Lake Tanganyika (the second biggest in the world) has, since 1946, witnessed a thinning of fish reserves (estimated at 38%) due to combined effects of overfishing and climate change (Fleishman, 2006).

Area-based fishing rights, commonly referred to as Territorial Use Rights for Fishing programs (TURFs), allocate secure, exclusive privileges to fish in a specified area to groups, or in rare cases individuals. Well-designed TURFs have appropriate controls on fishing mortality and hold fishermen accountable to comply with these controls. TURFs are usually allocated to and managed by an organized group of fishermen called a Cooperative.

Most TURF systems do not grant ownership of fishing areas. They allocate exclusive harvesting rights for one or more marine species in a specified area. TURFs are ideal for species like abalone that will not move beyond TURF boundaries, but they can be designed for species that are more mobile as well. TURFs may occur independently, or they may be part of a broader system of TURFs. Well-designed networks of TURFs can be used to manage more complex fisheries, including those with mobile species and multiple groups of fishermen.

### **1.1 The Policy Framework and reform strategy**

The provisions of PFRS incorporate best practices for sustainable fisheries management and responsible aquaculture development, which have been identified as stakeholder priorities. The rational implementation of the PFRS entails identification of user-friendly, appropriate strategies that would facilitate alignment of national and regional fisheries and aquaculture policies to these PFRS provisions.

A complimentary document to the parent PFRS, to provide guidance for the PFRS implementation, has been developed through consultative processes. These processes involved key stakeholders: African Union Member States (AU MS), Regional Economic Communities (RECs), specialized regional institutions in fisheries and aquaculture, NSAs, members of the AFRM, development partners, individual experts and key institutions.

The guidance document describes the criteria/parameters for the alignment of national and regional policies with PFRS, the indicators to monitor the process of alignment, implementation, and the supporting mechanisms for implementation. The guide also includes indicators to measure the medium and long-term impact of the anticipated sector reforms that are engendered by this pan-African policy and other instruments.

Tools or measures in the form of criteria and indicators are suggested by the guide. Criteria for alignment ensure consistency and coherence between national and regional policies and strategies with the PFRS; they are the elements that are used to assess consistency or coherence. Indicators are pointers to measure the progress in the implementation of the PFRS and its provisions and thereof towards its outcomes. Together, these enable all actors charged with management and development of fisheries and aquaculture at national and regional levels to implement PFRS effectively. Mechanisms for implementing PFRS by engaging other stakeholders, including Non-State Actors and development actors, are also provided.

The PFRS is, therefore, the product of a broad and inclusive, participatory and transparent, interactive process that identified seven policy objectives as critical to Africa's fisheries development. We will focus on the first policy objective:

*“enhancing conservation and sustainable use of fisheries resources through the establishment of national and sub-national governance and institutional arrangements. The fishery sector of most States that are members of the African Union consists of capture fisheries and aquaculture” (AUC-NEPAD, 2014).*

**Box 1. PFRS on user rights-based systems, under section 4, “Conservation and Sustainable Resource Use.”**

Design and apply appropriate users rights-based systems

- a. Moving from open access fisheries to user rights-based fisheries is a key element in increasing societal benefits from the sector while ensuring ecological sustainability of the resource. Member States are invited to define and design various suites of user rights-based fisheries management that take into account the geographical scope, socio-cultural context and nature of the fisheries, and minimize negative impacts to vulnerable groups and ecosystems.
- b. Ensuring that sustainable fishing operations are maintained, through for example, implementing TAC-based system, and that fishing effort does not undermine the status of the fish stocks in question.
- c. Designing and implementing Territorial Use Rights in Fisheries for small-scale fisheries and provide the necessary regulatory frameworks and institutional support.

Source: AUC-NEPAD (2014). The Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa

## 1.2 Description of the fishery

### (a) Fisheries in Cote d’Ivoire

Fisheries and aquaculture represent 3.1 % of GDP and 0.74 % of the total GDP. The sector provides nearly 70 000 direct jobs and supports over 400 000 people. Fish is the main source of animal protein for the Ivorian consumer, i.e. 50%, and represents 15-16 kg/year of consumption per capita. The sector has a long experience in the processing industry. The country is one of the EU's top ten suppliers of canned tuna.

The Strategic Development Plan for Livestock, Fisheries and Aquaculture (PSDPA) for the period 2014-2020 has the objectives to renovate and develop production and processing infrastructure to facilitate the trade of value-added products.

Despite the adoption of the PSDPA, the sectoral fisheries policies have not changed much since the 1960s.

The sector provides an abundant protein diet to the populations, export revenue and diversified fishery resources if sustainably managed. The sector is limited by numerous shortcomings that impede the implementation of the policy and limit the performance of the sector. The obsolete legislation led to the following:

- Weak governance of fisheries and poor law enforcement to regulate fisheries
- IUU fishing and Poor statistical data to support fisheries planning and management
- The deficit in the trade balance of fishery products
- Poor working conditions fishermen of the SSF
- SSFs lack power and control; are still open access.

Cote d'Ivoire must make significant efforts in order to align the laws to the PFRS and to adopt user rights approach to the SSF.

#### (b) Fisheries in Senegal

The coastline is around 718 km, and the country is a well-stocked river system, comprising the following:

- Senegal River (340 000 km<sup>2</sup>)
- Saloum River (29 700 km<sup>2</sup>)
- Casamance River (16 300 km<sup>2</sup>)
- Gambia River (77 100 km<sup>2</sup>)
- Lake Guiers (350 km<sup>2</sup>).

Fishing is the first provider of export earnings; it contributes significantly to job creation and food intake. Already, several foreign investors are present in the area and are exporting their products to Europe, Asia and America. Fish and shrimp are the main products processed industrially. Each year Senegal harvests 30 000 tonnes of shrimp from Casamance Islands, Saloum, and St. Louis on an exploitable potential estimated at 450 000 tonnes/year. There are 600 000 direct and indirect jobs, two-thirds of which are provided by artisanal fisheries, mainly domestic marketing and small-scale processing. As for aquaculture, it is considered a priority. Preferred areas and conditions for its development were identified in the state report with the private sector.

#### *Senegal fisheries subsector*

Senegal's fisheries subsector has historically been one of the country's largest sources of foreign currency. Seafood represents close to a quarter of Senegal's exports. Industrial fishing consists of sardines, tuna, and trawler harvests (shrimp, mullet, sole, cuttlefish, and so on). Artisanal catches are mainly destined for the local market, with a large proportion purchased for processing by local factories. The fishing industry is also a key subsector for employment. At the local level, thousands of families depend on fish as a nutritional staple.

The European Union (EU) is the largest market for Senegal's seafood exports. Various agreements with the EU allow its fishing craft access to Senegalese waters, while setting export quotas and limits and requiring that part of the catch, especially tuna, is supplied to local processing industries (Ndiaye, 2006).

#### *Senegal Artisanal Fisheries*

The Senegalese fisheries are predominantly artisanal, i.e. they take place by the use of canoes operated by traditional fishing communities, some also fishing on foot without vessels. There is an important number of landing sites for the marine sector along the 700 km-long Atlantic coast, from Saint Louis in the north to Boudiédiéte in the south. Inland fisheries are mainly found in the deltas of the three main rivers; Senegal, Saloum and Casamance. About 82 000 fishers work in the artisanal sector, with an equal distribution between the marine and the inland sector. In addition, there are some 37 600 jobs in ancillary activities, mainly fish processing and marketing. This provides 119 600 jobs in the sector, among which 30 percent are women.

Numbers of fishermen, fishing boats and gear have risen, along with land-based facilities including fish processing plants and cold storage depots. Although fisheries production grew with an increase in fishing activities and the concurrent expansion of processing facilities, production more recently has begun to decline due to uncontrolled fishing, which has resulted in annual catches exceeding a sustainable level of output.

Fisheries' production in Senegal rose until the mid-1980s after which catches began to level off and landings in the country's fishing ports began to decline. Since then, SSF activities have expanded while the number of large fishing vessels has remained stable.

Rising world prices and demand for fish have encouraged the expansion of SSF in spite of the smaller catches being landed. In addition, Senegalese fishermen have ventured further up and down the coast of West Africa in search of fish, catching lower value species and fishing in neighbouring countries' territorial waters. One result of SSF expansion is that many of the highest value coastal demersal fish stocks are severely depleted and facing rapid decline unless effective fisheries management is introduced. According to the FAO, Senegal's total wild capture fish production in totalled 405 000 metric tons (mt). Foreign fishing vessels also are active in Senegal's waters with fishing boats from various EU countries normally taking about 10 000 mt per year, mostly of high-value crustaceans and tuna.

Government recognition of the fishery sector's importance resulted in the government naming sustainable fisheries development as a key driver in the country's first Poverty Reduction Strategy Paper, 2003-2005. Fisheries is named as one of five sectors in the national economy with high development potential in the current second Poverty Reduction Strategy paper 2006-2010.

Senegal's Ministry of Maritime Economy, Marine Transport, Fisheries and Community Protected Areas (MEM) is the main government agency involved in implementing the sustainable fisheries development programme. On a local level, the ministry works with Local Fishers Councils and Local Artisanal Fishers Councils to co-manage coastal resources in each particular area.

Studies have shown that around 70 percent of community members surveyed in participating communities are satisfied with project activities to rehabilitate coastal fish stocks, including the use of protected fisheries zones, the construction of artificial reefs and the use of eco-labelling for processed fisheries products.

#### *Economic contribution and social implications of the fishing activity*

The fisheries sector contributes 12 percent of the primary sector GDP and 2.5 percent of Gross Domestic Product (GDP). It represents 170 billion CFA equivalent currency and 30 percent of export earnings.

The subsector of artisanal fishing employs 60 000 fishermen (17% of the active population), of which 20 percent (12 000) are for small coastal pelagic fisheries. The continental fishing, according to the review of existing documents, reported 30 000-40 000 people involved in inland fisheries, which suggests the opportunity to use this subsector as a brake on the rural exodus.

Fish contribute to 70 percent of the nutritional intake of animal protein, offering a per capita consumption of 26 kg; this is double the African average and higher than the world average (20 kg). Employment in fisheries provides income for almost 20 percent of the labour force and around 10 percent of the rural population.

Women work mainly in the post-harvest subsector (40 000 processors). They earn their livelihoods through the processing and marketing of cured products. The importance of women's involvement in the sector is favourable when setting policies for poverty reduction. Through these activities, women contribute significantly to revenues for their family, thereby reducing poverty in fishing communities. In many cases, they completely provide only all cost households.

## **2. MANAGEMENT OF THE FISHERY AND RIGHTS-BASED APPROACH**

## 2.1 Management of the fisheries

The marine and inland fisheries sector suffers from a lack of control of the national artisanal and industrial fishing effort, and also a weakness of the means of control and surveillance of the fisheries, which are at the origin of non-responsible exploitation. Overexploitation and poor management threaten wild fisheries in Senegal, too. They further constrain the growth of fisheries and reduce their resilience in the face of climate change. Improved management of fisheries at the national and regional levels is necessary to mitigate these threats and enhance their adaptive capacity.

Coastal demersal fish species usually account for around 25 percent of the annual fish catch and represent more than 50 percent of fishery export value. Consequently, problems facing coastal demersal fisheries in Senegal are of major concern. The report 'Western Africa is Missing Fish', published by the Overseas Development Institute, claims that Senegal lost USD 300 million or two percent of its GDP to IUU fishing in 2012 (Daniels et al., 2006). Senegal recently launched a campaign to emboss or place identification plates on 19 009 registered artisanal boats. Registration and embossment allow the monitoring of the overall capacity of the artisanal fleet; they are first steps toward better governance of the fisheries sector and serve as a welcome, protective mechanism against domestic and foreign IUU fishing.

With threats to the long-term sustainability of fish stocks accompanying increasing poverty, the government has made a diagnosis of the sector and responded appropriately to preserve its fisheries resources sustainably. The *Plan Sénégal Émergent (PSE)* and the Fisheries Ministry worked with all private sector actors to carry out an analysis of the value chains of the sector. The exercise highlighted the opportunities and weaknesses of the sector in line with the National Fishery Policy (Lettre de Politique Sectorielle).

## 2.2 Brief history of former rights-based

Traditionally, the coastal communities of Senegal defined their fishing territories and access was granted to all members of the community. Unfortunately, the open-access regime to artisanal fisheries has contributed to the depletion of marine resources and the increase of fish prices. The overexploited fish stocks have pushed the Senegalese to extend their navigation range, and therefore target fish further offshore, often in the neighbouring countries of Guinea-Bissau and Mauritania. This search for more productive fishing grounds add to the costs due to the additional fishing gear needed, the price of the fuel used for a wider fishing range, and the increased risk of accidents at sea. These increased costs of fishing have reduced fishermen's revenues significantly. In addition, the commercial SSF fleet went from 13 000 boats in 2009 to 19 000 in 2015. This increase in the number of boats without proper monitoring and control have continued to impact the country's already overexploited resources negatively.

## 2.3 Rights-based approach

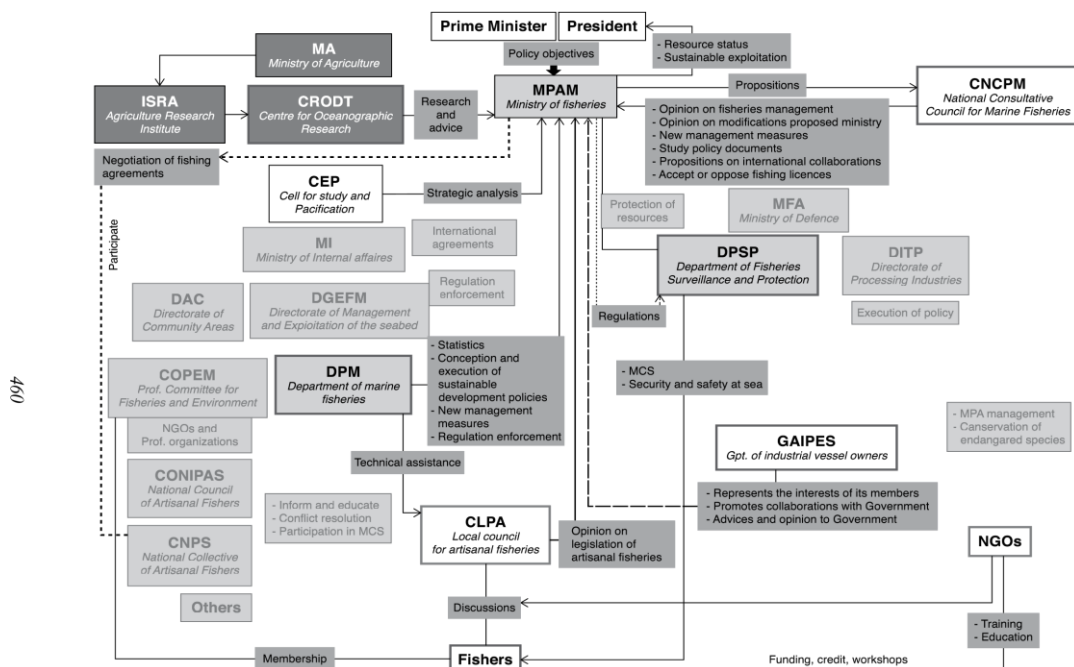
To change its approach from top-bottom to bottom-top, the government operated the boat identification mechanisms and made a first step in the acquisition of fishing permits with management features such as target species and zones. In the event of an accident at sea, identification mechanisms allow for rapid identification of a boat and its crew.

Senegal has had much success in the co-management of marine resources. In the coastline, fishmongers, boat owners and other stakeholders came together to implement a system aimed at ensuring balanced management of resources; the results were transformative. Key species that were hard to find have begun to return in the co-managed areas.

In the view of empowered communities, it is essential to decentralize through devolution of rights and responsibilities in order to better protect resources. These efforts are expected to bring better governance

and eventually restore the fisheries resources, replenishing them both in terms of abundance and diversity.

Since the country adopted the bottom-top approach, the organogram (Figure 1) included the stakeholder's role in fishery management.



Note: Secondary institutions and their roles are shown in light grey.

**Figure 1. Diagram of the main institutions governing the fisheries in Senegal.**

#### *Governance outcomes in Senegal:*

The bottom-top approach led to the strengthening and enabling of conditions required to enhance fisheries governance in Senegal at all levels. The important outcomes achieved to address governance issues include:

- Strengthening of Local Artisanal Fishing Councils (Conseils Locaux de Pêche Artisanale, or CLPAs) and their steering committees (ICC);
- Promulgation and adaptation of Conventions Locales (CLs),
- Dramatic increases in the issuance of fishing licenses,
- Increases in boat registration,
- Increases in the issuance of seller cards.

#### *Strengthening of the CLPAs and their ICCs:*

The existing CLPAs and development of new CLPAs have been critical to the success of the program. Specific examples of achieving this outcome include:

- Revitalization of CLPAs, and assistance using a participatory and inclusive mechanism, to promulgate 'local conventions' to implement the policy framework and the adopted fishery management strategy (See promulgation of local conventions below)

- Capacity development of CLPAs and their ICCs on administrative and financial management, fundraising mechanisms, community organization and dynamics, resource management, collaborative surveillance, monitoring, and climate change adaptation
- Organizing CLPAs into relevant technical committees (Rufisque/Bargny and Yene/Dialaw)
- Establishing the new CLPA in Kafountine in the Casamance
- Facilitating the renovation and provision of equipment in CLPA offices in Rufisque/Bargny, Mbour, and Sindia Sud.

#### *Promulgation and Adaptation of Conventions Locales (CLs):*

In order to provide the legal underpinning for CLPAs to negotiate fisheries management rules in each area of intervention, convention locales (CLs) have been promulgated by the CLPAs and approved by the local central government representative (local authorities). The establishment and implementation of these CLs are also critical for stakeholders to participate actively in developing collaborative management plans. Specific examples of the outcomes achieved to support CLs include:

- Establishment of six CLs, for the CLPAs in Sindia, Mbour and Joal Fadiouth, and in Cayar, Rufisque/Bargny, and Yenne/Diallao
- Development of new CLs for the Ziguinchor, Kafountine, and Saint Louis CLPAs
- Conducting of surveys of fishery stakeholders and their equipment in Ziguinchor, Kafountine, and Saint Louis
- Disseminating of CLs via awareness meetings (in Yenne/Dialaw, Rufisque/Bargny and Cayar) and radio programs (in Joal Fadiouth, Mbour, Ndayane, Cayar and in Rufisque)
- Development of three fisheries management plans for three zones: (1) Petite Côte (CLPA Joal, Mbour, Sindia-North, Sindia- South and Palmarin); (2) Cape Verde (CLPA Yenn-Dialaw, Rufisque-Bargny, Pikine and Hann) and (3) Grande Côte (CLPA Cayar, Dakar Yoff West and Fass Boye).

### **3. CONTRIBUTION OF THE RIGHTS-BASED APPROACH TO ACHIEVING SUSTAINABILITY**

#### **3.1 Sustainable use of resources**

Establishing boat identification mechanisms was the first step in the acquisition of fishing permits with management features such as target species and zones. “This campaign is part of a greater effort toward sustainable fisheries in Senegal; the goal is to improve fisheries governance and management, help rebuild stocks for food security, and allow a sizeable increase in revenues from the wise use of marine resources. The activities include community-led fisheries management and artisanal fisheries that have traditionally been unmanaged.” (World Bank, 2016).

#### **3.2 Economic viability of the fishery**

To relieve the pressure on fishing resources while continuing to provide for the social and economic needs of the fishing communities, government through development partners financed alternative livelihoods and entrepreneurship among women, allowing the reconversion of fishermen.

In the region of Thies, fishermen, fishmongers, boat owners and other stakeholders came together to implement a system aimed at ensuring balanced management of resources. The results were transformative. Key species that were hard to find have begun to return in the co-managed areas. Lobsters’ weight has increased by 133 percent, allowing communities to enjoy larger returns. To sustain the results of community-led fisheries management, the government decided to further decentralize and to empower communities by giving them the rights and responsibilities needed to protect the resources better. These efforts are expected to bring better governance and eventually restore the fisheries resources, replenishing them both in terms of abundance and diversity.



### 3.3 Social equity

The bottom-top approach led to successful co-management. As a result, authors record an improvement of sustainable, high-quality protein for the nation and of quality of life among artisanal fishermen, who can maintain the productive capacity of marine and coastal ecosystems. These aspects support the government efforts to achieve reform in the marine fishery sector and to enhance the participation of the artisanal fishermen and women in the decision-making processes; this is in accordance with the Sectoral Letter for the Development of Fishery and Aquaculture of 2008 (revised in 2016).

## 4. MAIN CHALLENGES AND WAY FORWARD

### 4.1 Challenges for the fishery

- (a) To strengthen institutional and stakeholder capacity at all levels to implement an ecosystem-based, co-management approach towards sustainable fisheries, taking into account climate change impacts in the fisheries sector.
- (b) To identify and test governance strategies, policies and best practices.
- (c) To build ecosystem resilience to threats to biodiversity conservation and climate risk.

### 4.2 Improving fishery sustainability in the future

- (a) To enhance social and economic benefits to artisanal fishing communities.
- (b) To provide incentives to a continued sustainable fisheries agenda.

Senegal did well in the alignment with the Policy Framework and Reform Strategy for the Fishery and Aquaculture sector.

### 4.3 Recommendation on the Turfs and user rights for the Region

#### Elaboration of policies and a regulatory framework consistent with international and regional conventions:

- i. Develop coherent regional/national policies and laws to secure preferential use rights;
- ii. Strengthen community-based marine tenure institutions;
- iii. Improve capacity, effectiveness, and accountability of co-management arrangements to support community-based institutions.
- iv. Entrench community-based management in an ecosystem approach to fisheries management.

#### Development of appropriate and multi-source investments and credit schemes easy to access to secure sustainable small-scale fisheries:

- i. Design, on the basis of the SSF Guidelines, appropriate investments and credit schemes to support sustainable small-scale fisheries.
- ii. Identify priority reforms and strategies that could eliminate harmful subsidies leading to overfishing.
- iii. Develop strategies to support an inclusive coastal economy.

#### Designation of mechanisms to facilitate responsible governance of tenure in SSFs:

- i. Develop mechanisms facilitating responsible governance systems including flexible and adaptable tenure, respecting the rights of small-scale fishers and fishing communities to resources that promote sustainable development, social and cultural well-being.
- ii. Elaborate effective co-management arrangements, dispute resolution mechanisms, local participation, gender balance, youth work and empowerment; strengthen institutional capacity earmarked for responsible governance of marine tenure.

- iii. Promote responsible governance of marine tenure through collaborative forms of learning.
- iv. Enable governance and planning frameworks that recognize community-based marine tenure institutions including, rights, exclusion, withdrawal/access, management, enforcement, and alienation rights.
- v. Identify and build the capacity of national and local tenure governance bodies to secure these rights.

Strengthen marine tenure governance institutions to protect tenure rights and effectively engage in co-management arrangements at multiple scales of governance:

- i. Strengthen marine tenure governance institutions that support tenure arrangements through the creation and enforcement of associated rules.
- ii. Elaborate co-management arrangements that support ecosystem-based management.

Develop a country-specific sourcebook of good practices and lessons building on a global community of practice:

- i. Elaborate a toolbox on good practices on marine tenure systems for small-scale fisheries.
- ii. Adopt iterative approaches to adaptive learning that can benefit from building a broader 'community of learning.'

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