



HAL
open science

Impacts of development assistance: lessons learned for better fisheries and aquaculture governance

Jean-Yves Weigel

► **To cite this version:**

Jean-Yves Weigel. Impacts of development assistance: lessons learned for better fisheries and aquaculture governance. Workshop on Policy Coherence for Development in Fisheries, Apr 2006, Paris, France. ird-01065544

HAL Id: ird-01065544

<https://ird.hal.science/ird-01065544>

Submitted on 18 Sep 2014

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

**DIRECTORATE FOR FOOD, AGRICULTURE AND FISHERIES
DEVELOPMENT CO-OPERATION DIRECTORATE**

Workshop on Policy Coherence for Development in Fisheries

**IMPACTS OF DEVELOPMENT ASSISTANCE : LESSONS LEARNED FOR BETTER FISHERIES
AND AQUACULTURE GOVERNANCE**

24-25 April 2006

IEA Headquarters, 9 rue de la Fédération, 75015 Paris

This paper has been prepared by M. Jean-Yves Weigel of the Institut de Recherche pour le Développement (UMR n°063 IRD/Université de Versailles/Saint-Quentin en Yvelines), France.

For more information, please contact : Carl-Christian.Schmidt@oecd.org

JT03206475

IMPACTS OF DEVELOPMENT ASSISTANCE : LESSONS LEARNED FOR BETTER FISHERIES AND AQUACULTURE GOVERNANCE¹

Abstract

Considering the increasing importance of the development assistance, further thought needs to be given to its impacts on governance of fisheries and aquaculture in developing countries. From West African and South-East Asian examples, three of the main axes of the development assistance can be identified: the increase in small-scale fishing capacity, the connection to the export markets, the small-scale aquaculture development. Some impacts of this assistance can be pointed out: the setting up of a large small-scale capacity or overcapacity, the increasing dependence on export markets and the decrease in food security in West Africa, the damage to environment linked to small-scale shrimp aquaculture development in South-East Asia.

By privileging these axes of development, the assistance contributes to the emergence or to the maintenance of governance systems which pose some problems. The problems relating to fisheries governance systems can be mentioned as follows: the fisheries governance limited to fisheries management, the weakening of the public power and public actions, the fragmentation of the fisheries administration and civil society. These problems are amplified by the development assistance and they contribute to some breaches of good governance principles of which we give some examples.

Some lessons can be drawn from the analysis of fisheries governance systems which have been encouraged by the development assistance: a need for a new approach of the fisheries governance which lies beyond the framework of the fisheries management, the obligation of an integration of fisheries or aquaculture development assistance programmes into national and regional public policies, the necessary rehabilitation of the fisheries administration and the strengthening of institutions.

1. Introduction

1. The development assistance for the fisheries and aquaculture sector is bilateral, multilateral and is also provided at European level. Among others, several instruments can be mentioned like grants, risk capital, loans to the private sector.

2. The bilateral assistance emanates from development cooperation agencies funded by many developed countries. We can mention, among others, the Japan International Cooperation Agency (JICA) which carries its effort on the South and South-East Asia and on Africa, the USAID, the Canadian International Development Agency (CIDA), the Danish International Development Agency (DANIDA) which act all over the world, and further more the Department for International Development (DFID) from United Kingdom, the *Deutsche Gesellschaft für Technische Zusammenarbeit* (GTZ), the *Agence Française pour le Développement* (AFD). Recent development indicates a priority orientation of the funding, which

¹ This paper has been prepared by Mr. Jean-Yves Weigel of the Institut de Recherche et Développement (UMR n°63 IRD/Université de Versailles Saint-Quentin en Yvelines), France, [Email: weigeljy@ird.fr](mailto:weigeljy@ird.fr). The original paper was written in French.

is, on the one hand, the small-scale fishing within the framework of Poverty Reduction Strategies in Sub-Saharan Africa and, on the other hand, the sustainable aquaculture in South East Asia.

3. The multilateral assistance comes primarily from the World Bank in particular through the International Development Association (IDA), from the International Fund for Agriculture Development (IFAD), the Global Environment Facility, the Asian Bank of Development, the African Bank of Development, the Inter-American Development Bank etc... One can also classify, as international assistance, that coming from NGOs, as IUCN or WWF, which are very active regarding the preservation of biodiversity and fisheries resources. The multilateral assistance has been directed for a long time towards the development of an industrial fishing capacity, the construction of harbour infrastructures or processing plants. For the last few years, one has noted a reorientation towards the institutional support and the integrated ecosystem or fisheries management, in particular in association with the Global Environment Facility.

4. The European Development Fund (EDF) is a major instrument of the European Commission for development assistance to ACP countries (Africa, Caribbean, Pacific). The Ninth EDF has been allocated over the period 2000-2007 following the Cotonou Agreement. The fisheries development assistance provided by the EDF forms part of a broader European framework. In particular, the funds of the Commission's general budget may be used for certain types of aid, and some funds of the European Investment Bank are also allocated to the development assistance. Last but not least, let us quote, the royalties paid by EU within the framework of fisheries access agreements. From a general point of view, besides fisheries access agreements, the European development assistance is focused on small-scale fishery and on the sanitary improvement of packaging and processing for export.

5. Considering the increasing importance of development assistance, further thought needs to be given to its impacts on governance of fisheries and aquaculture in developing countries. From West African and South-East Asian examples, three of the main axes of the assistance can be identified: the increase in small-scale fishing capacity, the connection to the export markets, the small-scale aquaculture development.

6. In the first part of this paper, we shall point out some impacts of this assistance: the setting up of a large small-scale capacity or overcapacity, the increasing dependence on export markets and the decrease in food security in West Africa, the damage to environment linked to small-scale shrimp aquaculture development in South-East Asia.

7. By privileging these axes of development, the assistance contributes to the emergence or to the maintenance of governance systems which pose some problems. In a second part, we shall mention the problems relating to fisheries governance systems: the fisheries governance limited to fisheries management, the weakening of the public power and public actions, the fragmentation of the fisheries administration and civil society. These problems are amplified by development assistance and they contribute to some breaches of good governance principles of which some examples are provided.

8. In a third part, some lessons from the analysis of fisheries governance systems which were and which are encouraged by the development assistance will be drawn: a need for a new approach of the fisheries governance which lies beyond the framework of the fisheries management, the obligation of an integration of fisheries or aquaculture development assistance programmes into national and regional public policies, the necessary rehabilitation of the fisheries administration and the strengthening of institutions.

2. Some impacts of development assistance

9. Three of the main axes privileged by the development assistance have been identified.

10. The first one is the increase in the capacity of small-scale fisheries. The donors have justified this assistance by the positive effects of small-scale fisheries on the creation of jobs and the redistribution of fisheries' incomes among a larger number of economic agents. According to West African examples, the impact of this setting up and the problems which it induces can be put forward: the creation of a large small-scale fishing capacity.

11. The second axis has been the connection to export markets. This connection resulted in an exponential growth of fish exports, but also in a stagnation or a reduction in the supply to national markets. According to the same examples, it is possible to determine the impact of this connection: an increasing dependence on export markets and a decrease in food security.

12. The third axis is the small-scale aquaculture development. It is in Southeast Asia that this assistance is very successful from an economic point of view, especially in regard to shrimp aquaculture. It is this example, and more particularly that of Thailand, than we retained to show the negative impacts of assistance on the environment.

2.1. The setting up of a large small-scale fishing capacity or overcapacity

13. The development assistance contributed mainly to the exponential growth of the capacity of small-scale fisheries during the last three decades. In West Africa, this assistance took the form of projects primarily. As far as Mauritania is concerned: the Project Coastal Fisheries funded by the Japan International Co-operation Agency (JICA) or the Project of Development of Small-scale Fisheries in the South (PDPAS) funded by the *Agence Française pour le Développement* (AFD). As far as Senegal is concerned: one can mention projects funded during the last decade by the European Development Funds (EDF), AFD or JICA: the Project of development of small-scale fisheries on the *Petite Côte* (PAPEC) and the PAMEZ Project of development of small-scale fisheries in Ziguinchor (PAMEZ) former to the PROPAC Project of support to the professionals of small-scale fisheries in Casamance (PROPAC) and to the Project of support of small-scale fisheries in the South (PAPA-Sud). As far as Gambia is concerned: the Fisheries Development Project of the African Bank of Development (ADB). As far as Guinea-Bissau is concerned: *Projecto de Desenvolvimento da Pesca Artesanal Avançada* funded by ADB or in the past the Project of Development of Small-scale Fisheries in the Bijagos Archipelago funded by the Swedish International Development Agency (SIDA). As far as Guinea is concerned: the Project of Development of Small-scale Fisheries funded jointly by the ADB and AFD, the Project of the Fish Market of Kénien and the Project for the Rehabilitation of the Fishing Port of Boulbinet funded by JICA.

14. Thus, in West Africa, small-scale fisheries are in full expansion and are accompanied by a colonization of the whole coast with the opening, for ten years, of new fisher settlements such as in Guinea-Bissau or in Mauritania. For all of the countries of the Sub-Regional Fishery Commission (SRFC), from Sierra-Leone to Mauritania including Cape Verde, the number of small scale fishing units can be estimated at 30 000 including 60% of motorized canoes for a production of 600 000 tons. The development assistance subsidises the motorization, the purchase of fishing gears, the working capital of fishing units, but also the fish trade and packaging for exports to the European and Asian markets. It also subsidises the infrastructures such as piers and roads. Thus, the development assistance influences the profitability of

fishing units by encouraging an increase in the fishing effort². Lastly, the low costs of the labour force and the frequent multi-activity of the fishers also explain the profitability of small-scale fishing units.

15. The example of Mauritania illustrates the increase in the capacity of small-scale fisheries. In 2003 the number of small scale fishing boats (pirogues) was 3 700 harvesting at a 80 000 ton estimate by *Institut Mauritanien de Recherches Océanographiques et des Pêches* (IMROP). Of this total, the pelagics would represent 25 000 tons (mainly small pelagics) intended primarily for the domestic market. The species with strong commercial value, demersal fishes and cephalopods, would represent 55 000 tons intended for the European and Asian markets. The Mauritanian small-scale fisheries experienced a spectacular development as the number of pirogues quadrupled between 1991 and 1997. But it is starting from the end of the 90s and the actions carried out within the framework of the strategy of fishery sector management and development of 1998 that, thanks to the contribution of donors, the small-scale fisheries experienced a very significant development: the number of fishermen estimated at 3 000 in 1991 to 12 000 in 2001 (MPEM, 2003). Currently 33 000 direct and indirect jobs would be generated by small-scale fisheries (MPEM, 2005). From now on, one of the main constraints of Mauritanian small-scale fisheries is the lack of control of the fishing capacity. Indeed, as in all of the West African countries, one can put forward a gap between the legislation and its application. On the legal level, the control of fishing capacity is made possible by the Law 2000-025 bearing Code of Fishing and by its decree of application 2002-073. Generally, the fishing rights belonging to the State are conceded in the form of licenses, in particular a small-scale fishing license and a coastal fishing license. This system is applied in the case of coastal fishing, and very partially in the case of small-scale fishing, because the registration by the Merchant Navy Services is not complete, is lacking in simplicity and does not yet refer to the management plans per type of fishery.

16. Thus the development assistance contributed to create a high level of small-scale fishing capacity which, in certain cases, can be regarded as an overcapacity given the overexploitation and even the risk of extinction of some stocks targeted by small-scale fisheries. (CECAF, 2004; FAO, 2003). However, the reduction of an overcapacity of small-scale fisheries poses specific problems which are difficult to solve, especially in the developing countries.

17. The first problem is connected with the measurement of small-scale fishing capacity and with the definition of relevant management units. "They are indeed difficulties associated with the collection of data as well as input-based or output-based measurements of capacity in such fisheries (e.g. the flexibility with which crafts involved can accommodate additional labour and shift from fishery to fishery). Difficulties also arise with regard to establishing target output and input levels. Fleet mobility constitutes one of the main difficulties encountered in measuring capacity and assessing overcapacity. Fleet mobility can relate to geographic mobility and/or the ability of vessels to redirect effort from one target stock to another in the same area. Thus capacity needs to be considered on a fleet basis as well as on a species or stock basis, with further consideration being given to the relevant geographic perspective (local, national, regional or global perspective according to fisheries). The key question is where to draw the line and, if starting from a stock perspective, how to define "latent capacity". This question relates directly to the need to define fisheries as management units that are relevant to the management of fishing capacity." (*in* Greboval, 2003: 10). Another difficulty raised by this author is relating to the necessary drawing up of a link between harvesting and processing capacity in the case of small-scale-fleets, because the catches of small-scale multispecific fleets are very frequently processed in different ways. It means that a relevant link can only be established at a fairly aggregated level.

² This increase induces a fall of catches per unit of effort but the profitability of the demersal small-scale fishery is ensured with constant raising prices compensating the decrease in the catch per unit of effort and the increase in the costs of inputs.

18. The second problem relates to the economic and social costs of the transition to an appropriate fishing capacity through vessel decommissioning or redeployment of workers. These costs cannot be taken in charge by the developing countries budgets. The West African countries need technical and financial assistance to achieve an appropriate regulation of fishing capacity. But of course, a preliminary condition is to stop the development assistance directly or indirectly dedicated to an inappropriate increase in smallscale fishing capacity.

2.2. The increasing dependence on export markets and the decrease in food security

19. The dependence of West African fisheries on export markets is illustrated by the importance of exports which represent more than 70% of the catches in the EEZs of countries of the Sub Regional Fishery Commission. During last two decades, the development assistance supported indirectly the connection to export markets by encouraging the deregulation and disengagement of the States in the name of the restoration of public finances and free market. But the development assistance also supported directly this connection when it funded projects for the setting up of fishing fleets targeting the exportable species or when it brought the packaging and processing factories into compliance with European or Japanese standards. Lastly, one of the methods of development assistance was the granting of tariff preferences by the European Economic Community, then the European Union, so as to encourage exports.

20. The deregulation initially touched the commercial transactions. Thus, the transactions relating to fishing and fish trade in Guinea-Bissau, codified with the promulgation of a very precise nomenclature and controlled by state-owned companies and central buying offices since Independence, have been gradually deregulated since 1987 in favour of fish traders. The deregulation was carried out also by the quasi-total abandonment by the States of a tariff policy, as shown by the abolition of export taxes for fishery products which have become effective since 1985 in Gambia.

21. The disengagement of West African States from the productive sector resulted first in the deactivation or the dismemberment of state-owned companies, then, in their privatisation in the name of the suppression of state monopoly. As an example, one can still quote Gambia with the progressive opening of fish marketing to private contractors and the progressive disengagement of the state-owned companies on all the levels of the fish chain, as well on the level of the freezing companies as on the level of the distribution of inputs and fishing gears. As an emblematic example of privatisation of a state-owned company, one can refer to the *Société Mauritanienne de Commercialisation du Poisson* (SMCP) created in 1984 within the framework of a nationalisation policy of fishery products marketing, and whose capital opening has been imposed since 1993.

22. The connection to the European market was supported by the granting of already old tariff preferences, dating from the Lome 2 and Lome 1 Convention which stipulated that the products coming from the ACP countries could be exported duty-free of customs to the European Economic Community. The Lome Conventions after 1985, as well as the Agreement of Cotonou in 2000, offered to ACP countries important financial means, through the European Development Funds (EDF), a part of which was used for promotion or setting health standards, in particular for the laboratories in charge with the certification and the export companies. These commercial privileges reinforce the competitiveness of West African exports towards the European Union attested by the maintenance of shares of market for certain products, and confer a significant comparative advantage on countries like Mauritania, Senegal, Gambia, Guinea or Guinea-Bissau. Main products exported towards Europe are demersal fishes, cephalopods and crustaceans. They are essentially chilled or frozen products but not having generally undergone any processing. As for connection to the Asian markets, it results mainly in exports of frozen cephalopods for the Japanese market, of dried ray and shark fins for the Chinese market.

23. Three consequences of this dependence can be pointed out:

- ◆ The first consequence is an increased fishing effort on demersal species which results in a fall of catches per unit of effort and a fast reduction in the biomass for certain species (Gascuel and Laurens, 2001).
- ◆ The second consequence is a vulnerability with respect to the international commercial legislation insofar as the preferential treatment granted by the European Union to the ACP countries is disputed by World Trade Organisation (WTO). Indeed, the rules of WTO condemn this preferential treatment since the authorized advantages are not reciprocal and contravene the principle of non discrimination among countries having the same development level.
- ◆ The third consequence is a reduction in food security. Indeed, with an export market offering better returns and being interested in buying fishery products in large quantities, a growing number of fishermen specialized in catches intended for domestic market turned to demersal coastal fishing. Thus, the conditions of a stagnation or even of a reduction in the fish supply for the domestic market are met. Another effect is the reduction of the supply to the traditional processing. (Dème and Dahou, 2001). However, the increase in population, with a doubling of the West African population every twenty five years, would require an increase in the availability of fish. But the relative increase in catches in West African countries in a context of reduction of the abundance of certain species and increase in exports did not compensate for increase in population. This explains, globally, a reduction of availability of fish per capita in the countries of the SRFC when the fresh or traditionally processed fish is the principal source of proteins, in particular for the urban population.

2.3. The damage to environment linked to small-scale shrimp aquaculture development

24. Over the past twenty five years, the small-scale shrimp culture has shown a remarkable expansion in Southeast Asia; since it represents the most important production system in term of hectares and farms. This expansion is due mainly to the mobilization of budgetary resources from national budgets, private investments, but also from the development assistance.

25. In the case of Thailand, the development assistance for the dissemination of shrimp culture mainly came from the South East Asian Fisheries Development Center (SEAFDEC) funded by the Japanese Cooperation, from the Food and Agriculture Organisation (FAO), and from the Taiwanese Cooperation. As early as 1973, technicians trained in Japan succeeded at a Department of Fisheries's station in mastering the hatching and nursing of the *Penaeus monodon* and *Penaeus merguensis* from spawners taken from the natural environment. One of the reasons for the success of shrimp culture dissemination was the incentive to the creation of joint ventures which allowed the transfer of sophisticated technologies. Some of these joint-ventures obtained Board of Investment (BOI) fiscal privileges as well as facilities for the repatriation of profits. Another reason of this success was the implementation of financing plans, from 1985, enabling shrimp farmers to take advantage of soft loans. This policy was implemented through the nationalized Bank of Agriculture and Cooperatives (BAAC) and was accompanied by donors. But this policy and the development assistance were very production oriented, with few concerns for environmental degradation. (Weigel, 1994).

26. At the environmental level, the main impacts of the expansion of small-scale shrimp culture have been the encroachment of the mangrove forests, an increase in the salinity and acidity of soils, and pollution from the dumping of organic waste of aqua-cultural origin. These consequences can be observed in Thailand as well as in Malaysia, Vietnam and Indonesia.

27. Besides the fact that shrimp culture takes up and modifies a large amount of space (most often mangrove forests, salt flats, rice paddy converted into ponds), it also consumes inputs in bulk, and thus actively contaminates and pollutes the soil. In particular, the construction of ponds on converted mangrove areas has a direct impact in that it leads to cutting down the forest cover. But, it can also have indirect effects. One of these may be the deterioration of the remaining mangrove forests in two conflicting ways, depending on the land and water flow configuration. First the accelerated water circulation caused by clearing part of the mangrove forests provokes leaching, and thus erosion and an increase in salinity and acidity. Secondly, preventing the free circulation of water by constructing numerous dikes, channels and canal induces the degradation of the mangrove forests. These changes in water circulation may have repercussion on the catches or even on the other forms of aquaculture practiced in the surrounding area. Another impact, the drop in the area's productivity, stems from the fact that the ecological fish and crustaceans niches have become rare and are no longer of the same quality. The destruction of the mangrove forests, which is the nursery for numerous aquatic species also affects neighbouring fisheries (marine and estuarine catches).

28. The pollution generated by the expansion of small-scale shrimp culture is linked to the most widespread production system, which is the so-called "Taiwanese" production system. This system is characterized by high densities per hectare which require the addition of a proportionate amount of industrial feed, of veterinarian products to control pathogens or accelerate growth (antibiotics, anabolic steroids), the addition of chemicals to control acidity (liming or calcium or magnesium based soil), or fertilizer (nitrate, phosphate or potassium based fertilizer). In particular, these different additions may lead to eutrophication, a case of anoxia, and fish and crustacean mortality. And since one of the features of this form of aquaculture is the daily renewal of water, the pond has to be discharged into the immediate surroundings, and therefore pollution spreads through secretion. Thus, the spreading of polluted water not only has repercussions on other uses, such as the consumption of drinking water, and rice, fruit or vegetable cultivation, but also on coastal aquaculture itself. In an area where intensification is badly controlled by the large number of shrimp farmers practising excessive densities without a water treatment system, intensive aquaculture pollutes the farm itself because of the necessary water renewal (other extraaquaculture factors may also contribute). The pollution may, in turn, be the cause of epizootic diseases which the farmer will try to combat by administering inappropriate medication, which, in turn, will give rise to the shrimps' resistance to antibiotics, ending up with significant mortalities. The outcome of this infernal cycle may well be the formation of a "moon landscape" of abandoned ponds like in the provinces along the Inner Gulf of Thailand (from Petchburi to Chachoengsao) at the beginning of the 1990's.

29. The expansion of the small-scale shrimp culture was an undeniable economic success but it involved an environmental degradation which presently does not allow to conclude to the sustainability of this activity. The development assistance is partly responsible for this environmental un-sustainability. The challenge which has to be taken up by the development assistance is to perfect and spread mangrove friendly shrimp culture technique. A program sponsored by the SEAFDEC in collaboration with the Department of Fisheries of Thailand paves the way. The four components of this programme concern: the integrated physical and biological technologies for water recycling in shrimp farming, the mitigation measures of effluent from shrimp farming on mangrove and coastal resources, an evaluation of seawater irrigation for intensive marine shrimp farming, a study on mangrove plantation for enhancing natural food web in water recycle shrimp farm. (Platon, 2001).

3. Some problems that the development assistance has given rise to in terms of governance

30. The development assistance has contributed to the emergence or to the maintenance of governance systems which pose some problems. In a context characterized by the setting up of a large small-scale fishing capacity, an increasing dependence on export markets and the decrease in food security,

the damage to environment linked to aquaculture, the problems relating to fisheries governance systems can be summarised as follows.

- ◆ First, a limitation of the fisheries governance to fisheries management which has, as a consequence, a weak application of the regulations imposed by the fisheries management plans.
- ◆ Secondly, a contribution to the weakening of the public power and public actions in a context of incompleteness of the decentralization which makes it difficult for the States to exercise their role of arbitrator and guarantor.
- ◆ Thirdly, a participation in the fragmentation of the fisheries administration and of the various communities involved in fishing, marketing or processing of fisheries products. These problems are initiated or amplified by the development assistance and they contribute to some breaches of good governance principles.

3.1. The fisheries governance limited to fisheries management

31. The fisheries management plans bring only technical or economic solutions to problems which should be seen in terms of a balance of power among the stakeholders. It remains neglected contrary to the political economy or political science approach which includes confrontations among divergent interests. Thus, the fisheries management plans do not give sufficient attention to the relationships in terms of a balance of power which determines for a great part the way in which the socio-economic stakes are adapted and in which the norms are applied. The transverse interests based on strong collusions among fishers, fish traders and government officials, and materialized by official or semi-official transactions with the State, are not taken into account or to a small extent only. The limits of this approach explain the weak application of the recommended measures, for example in the Senegalese case where the catches are regularly listed but where the national fishing Code remains unapplied, or can even sometimes be contradicted by local regulations.

32. One can give some examples of the limits of this approach: the difficulty of treating the “de-territorialisation” or relationship between immigrants and natives, or even the difficulty of taking into account the overlappings of fishing “territories” or fishing itineraries.

33. The fisheries management plans, which only rarely include the overlapping of various fishing “territories” or itineraries, have great difficulty taking into account the “de-territorialisation” of the fishing activity. For example, the management plans based on ecosystemic entities, integrate the fisher migrations or the organisational fluctuations with difficulty (such as the changes in the composition of fishing units) which often characterize the exploitation of fisheries resources in developing countries, all the more since the interdependences among fisheries make the establishment of territorial limits more and more complex. One can find this bias in some coastal management programmes promoted by the World Bank, such as in Senegal or in Guinea Bissau.

34. The management of such interdependencies represents one of the essential stakes of the governance which have to manage the interactions among groups, for example between the natives and immigrants. The excessive simplification of the relationship between these two groups does not take account of relations that they forged. Rather than to take the native/immigrant dichotomy as a starting point, often simplified to the extreme and not negotiated with the social groups themselves, it would be better to take into account the inequalities of access to resources.

35. The fisheries management plans are focused on the understanding of the biological impact or even bio-economic or ecosystemic one. This restrictive approach does not integrate the consequences of an intensification of the exploitation in social, economic or political terms, such as the increase in the inequalities or as the redistribution of the value added. The management plans prove to be too sectorial and reduced to only one segment of the fish chain.

36. By modelling essentially the withholdings from ecosystems, the fisheries management approach promotes functions of control of fisheries based mainly on the catches. While characterizing too schematically, or even not at all, the modes of exploitation, this approach does not allow an analysis of stakeholder practices and finally the level of equity of governance systems. So, this formulation does not propose methods of reaching the objective of sustainability in either of its three components (environmental, economic and social).

3.2. The weakening of the public power and public actions

37. As a consequence of the deregulation and the withdrawal of the States, the economic agents of the fish chain work in an environment characterized by a drastically reduced intervention of the public authorities, the downsizing of civil service and state structure. This context is also characterized by a contraction of government spending, resulting in the continuous drop in the public investment and in the subsidies to national development agencies. Thus, the successive structural adjustment plans restricted the economic role of the States to the follow-up of strategies initiated by the bilateral or multilateral development assistance, such as those relating to environment and sustainable development in Mauritania, to the setting up of agencies for the promotion of private investment (the Directorate-General for the Promotion of Private Investment in Guinea-Bissau), to the promulgation of legal and regulatory frameworks as Codes of Investment.

38. The reduction of instruments of intervention of the public authorities had to be compensated by a sustained policy of decentralization translated in the texts by a delegation of powers to local communities. Initiated by the international institutions then relayed by the bilateral co-operations, the policy of decentralization was imposed on all of the West African States accompanying, first, the Plans of Structural Adjustment Plans since two decades, and then, the construction of an *état de droit* during the democratic transition in Africa in the 1990's. But, the policy of decentralization came up against a hesitation of States to delegate tax resources to the local communities. Insofar as it attributes very limited financial resources to the intermediate or local levels, this reform is limited to a decentralization of central government authorities and to the organisation of forums of dialogs between the local and national level. One can speak about a limited decentralisation (Galetti, 2002) since a real administration of local communities was not carried on as a whole, and that decentralization concerns only limited points of competence. The governance of the West African fisheries is strongly influenced by this particular institutional context of decentralization. Therefore, there is on one side a fisheries administration having a limited staff and budget at its disposal, and on the other side the local communities to which the resources necessary for the development of the fishermen organisations or social associations are not voluntarily or involuntarily allocated.

39. A fisheries governance which would be based on the top-down paradigm and mutual trust paradigm comes up, in the first place, against the absence of decentralization (as in Mauritania) or its incompleteness (as in Senegal) materialized by the lack of the tax prerogatives to local communities. It comes up in the second place against the insufficiency of the process of devolving power away from administrative departments since the central State tends to monopolize all the strategic decisions, helped in that by its stranglehold on the tax resources. In the extreme case of Guinea Bissau, for historical reasons, the State has a vague desire to keep the population under supervision in collaboration with militant bodies and has shown until now a little concern as far as the progress of the devolving process is concerned. One

thus identifies badly the methods of measurements of compensation adapted for fishing communities undergoing important restrictions on the exploitation of fisheries resources.

3.3. The fragmentation of the fisheries administration and civil society

40. The fragmentation of the administration is seen by the large numbers of the government authorities which intervene in the development and the regulation of the fish chain without establishing a hierarchical or functional link among them. This situation can be characterized as an “institutional superposition” insofar as many administrations combine their various competences in a compartmentalized way. The result is an entropy of the State administrations which contributes to the weakening of public actions. The fragmentation of the administration materialises in two manners. Firstly by a competition at the national level among ministries which leads to a compartmentalization of the projects in order to collect the funds of the international assistance. Secondly, by difficulties of coordination of government authorities at the local level. This fragmentation of the administration is a serious obstacle in the realization of an application plan of the vertical governance (top-down paradigm). It is also an obstacle for the promotion of a sustainable development policy, the administrations oscillating permanently between a conservationist approach and an approach guided by the objective of an economic development.

41. The fragmentation of the civil society is seen by the multiplication of socio-professional organisations, associations, national NGOs, which are the principal recipients of the development assistance to the detriment of the state structures and the public development agencies. The fish chains also are concerned by the promotion of socio-professional organisations and associations, which arise under various configurations: cooperatives, Economic Interest Groups (GIE), mutual insurance companies of savings and credit, national NGOs, social associations. The diversity of their objectives as well as their chronic difficulties to coordinate their activities, seriously undermines the horizontal governance (mutual trust paradigm). One notices frequently the difficulties of coordination between NGOs and associations which call into question the effectiveness of the consultation mechanisms. Two examples illustrate this fragmentation: that of Senegal with the multiplicity of the socio-professional organisations and that of Guinea-Bissau with the expansion of national NGOs and social associations.

42. The wide range of the fishers' socio-professional organisations, small-scale processors, fish traders is within the scope of the Senegalese context which is characterized by the seniority of the associative or community movement; for example, the Federation of Senegalese NGOs was recognized by the State in 1978. More recently, some of the main beneficiaries of the international assistance are the Economic Interest Groups (GIE) united within federations like for example FENAGIE - Pêche (*Fédération Nationale des GIE de Pêche*) and the mutual insurance companies of savings and credit. The GIE and mutual insurance companies are given financings by the bilateral co-operations, the French one with the Project of Development of Small-scale Fisheries on the Petite Côte (PAPEC), the Canadian and Belgian ones with the Project of Support to the Mutual Insurance Companies of Savings and Credit in Senegal (PAMECAS). The GIE and mutual insurance companies also benefit from the international co-operation projects such as the Integrated Management Programme of the Marine and Coastal Resources (GIRMAC) funded by the World Bank. The GIE and mutual insurance companies are also funded by the international NGOs, such as the IUCN, or by the European NGOs, such as the Dutch NGO, NOVIB.

43. The expansion of the national NGOs in Guinea-Bissau takes us back to their function of structuring the socio-professional organisations and social associations. It is fed by the dominating role of the international NGOs which took note of the deficiency of the Bissau-Guinean State during last years. As an example of national NGOs active with the littoral or insular communities, in particular in the Archipelago of Bijagos, let us quote “Tiniguena”, “Tonjoron”, “Nantinyan”, ADIM, “Tankakan”, ADEMA, “Biligert”, FASPEBI, “Totokan”, “Tepenny”. As an example of the very active international or European NGOs, let us mention the IUCN and the FIBA for the first and SWISSAID and “*Iles de la Paix*”

for the latter. The dominating role of the international NGOs explains a conservationist connotation which privileges actions where sustainable development is concerned, such as the creation of National parks, the promotion of participative management and techniques adapted to a sustainable exploitation, the development of the cultural heritage and the environmental animation.

3.4. Some breaches of good governance principles

44. According to UNDP, the good governance is associated with the degree of application of five principles (UNDP, 1996). The first principle is that of legitimacy which is based on the participation and the consensus orientation. The second principle is that of direction which is based on a strategic vision including Sustainable Human Development. The third principle is that of performance based on the adequacy of institutions and processes to the needs of all stakeholders and on the efficiency. The fourth principle is that of accountability which is based on the obligation to give explanations to the public and to the institutional stakeholders in the transparency. The fifth principle is that of fairness which is based on the equity and the rule of law.

45. The analysis of the application of these principles to the governance of West African fisheries does not allow to conclude on a “good governance” because of: (i) the lack of negotiation and the relative inconsistency of the objectives of the development assistance (ii) the absence of the cost-benefit analyses done in terms of sustainability of fisheries resources exploitation or fisheries governance, (iii) the legal disorder as far as the rights of access to the fisheries resources and the delegations of powers are concerned, and (iv) the weakness of the specific financing of the governance measures.

46. The principle of legitimacy is not correctly applied if one refers to the lack of negotiation concerning the targets of the fisheries development assistance. In the deliberative governance approach, the application of the principle of legitimacy induces a mechanism of negotiation among stakeholders which guarantee the durability of decisions. To be accepted and to lead on to sustainable and easy to apply norms of fisheries resources exploitation, these decisions must lean on mechanisms of compensation. The necessary condition for compensation to materialize is to base the mechanism of negotiation on a pertinent analysis of the balance of power among the stakeholders. It is also the condition for the norms supposed to derive from this to be appropriated by the stakeholders and more generally by the communities. However the analysis of projects reveals on the one hand, the absence of a mechanism of negotiation, and on the other hand, a non-existent or very brief presentation of the balance of power among stakeholders, including within the communities of fishers.

47. The non-application of the principle of direction refers to the relative inconsistency of the development assistance objectives. One can give two examples: the inconsistency between the objectives of increase in the capacity of small-scale fishing and that of the sustainable development, and the inconsistency between the objective of development of national chains and the signature of fisheries accesses agreements without obligation of unloading.

48. For more than twenty years, the donors, as the Japanese Co-operation, the French Co-operation, the European Union, the African Bank of Development, have massively financed the development of small-scale fisheries in the name of its induced effects on employment and food security. The implementation of these various projects led to an exponential growth of the small-scale fishing capacity, in particular on the periphery of marine protected areas. This assistance aimed at increasing the fishing capacity continues, in spite of full exploitation or overexploitation of certain stocks confirmed since the end of 1990 (Gascuel and Laurens, 2001). This assistance continues whereas the donors mention a concern of sustainable development even if they prefer to express it in its economic and social components. This assistance continues and it is superposed on that focused on the marine protected marine areas and so it endangers the effect of these areas. Let us quote the financing of a long-range small-scale fishery on the

Petite Côte and in Casamance (Sénégal) which is a threat for the fisheries resources of the Saloum Delta Biosphere Reserve and Bolama-Bijagos Arquipelago Biosphere Reserve (Guinea-Bissau). The inconsistency between the objective of increasing the small-scale fisheries capacity and that of the sustainable development is particularly prominent as the same donor finances through one project an increase in the fishing capacity at the periphery of marine protected areas, and through another project the specific measures of monitoring of the fishing capacity which the donor contributed to create.

49. The objective of setting-up sectorial chains on a national scale as a means of accelerating the economic growth and redistribution of the wealth, is part of the Millennium Development Goals and the National Sustainable Development Strategies. The setting-up of fish chains goes through the unloading of catches and an industrial processing of demersal fishes and cephalopods, and the processing of small pelagics on shore. The stake is a repatriation of the value added and an industrialization of the sector. However, in West Africa almost all of the species with high commercial value are exported unprocessed in Europe and Japan; one is obliged to notice the absence of an industrialization of the fishery sector generating value added and employment. One of the reasons is the existence of fisheries access agreements which do not authorise unloading of the catches and in this way deprive the countries of the raw material likely to be processed. The fisheries accesses agreements do not facilitate the creation of national fish chains. Recall that for the countries which do not have a budget margin, the signature of fisheries access agreements with the European Union is in accordance with the structural adjustment plans which focuses on, at the instigation of the IMF and World Bank, the maximization of tax revenues imposed by budgetary concerns.

50. The principle of performance and accountability is not correctly applied insofar as there is no precise evaluation of the costs and benefits done in terms of sustainability of fisheries resources exploitation or fisheries governance. The absence of evaluation does not make it possible to guide the mechanisms of compensation essential for the initiatives of regulation of the resources exploitation. Without these evaluations, it is difficult to win acceptance for the adapted mechanisms of compensation and to evaluate the effectiveness of the management norms. The absence of setting up of periodic evaluation procedures does not permit to associate the various public and non-public organisations charged to implement the regulations of the access to fishing zones and fisheries resources. The lack of planning does not favour elaboration of collective decision mechanisms or permanent readjustments in order to materialize the objectives of sustainability over the long term. All measures specific to the fisheries sector are not, or slightly articulated with the broader measures concerning the littoral. This makes it difficult to have a global vision of the anthropogenic pressure and depredation of all of the renewable natural resources, for example in the case, where smoking of small pelagic species results in a deforestation of the mangrove. It is the lack of decentralization which mainly explains this fact. The absence of costs and benefits evaluations does not encourage the implication of all stakeholders which would allow them to collectively validate the objectives and to formulate together the new norms of the fisheries governance. Moreover, the lack of costs and benefit evaluations does not ensure the transparency of the fisheries governance since there is neither an assessment of the invested sums nor their use and their impact.

51. The non-application of the principle of fairness is evident given the legal disorganisation of the rights of access to the fisheries and the delegations of powers, and given the weakness of the specific financing of the measures of governance.

52. Concerning the rights of access, no inventory was practically carried out. The first negative consequence of this fact is that, the precondition to the recognition of rights, depending on the negotiated processes, namely a nomenclature of the rights of access, practically does not exist. However, in a certain manner, the establishment of this nomenclature in littoral and marine areas is less problematic than in the case of lands insofar as the rights of access to the first are obviously looser than to the second and are more the concern of the access to itineraries than access to territories (except for delta areas or estuaries). The

second consequence of this is that, in a West African context characterized by the diversity of groups exploiting the fisheries resources, the absence of a detailed categorization of stakeholders and practices as regards access to the resource (residents, users, small-scale activities, etc...) leads to an abusive schematisation in terms of autochthonous or immigrant communities. However, the legal organisation of the rights of access could not be based on the criterion of the "autochtony" considering the extreme overlapping of the modes of exploitation of fisheries, or on a territorial approach considering the "deterritorialisation" of fishing. In addition, the criterion of the autochtony can lead to the manipulation of an identity nature following the example of the rural land plan in Ivory Coast, where the census of the land rights brought about a great number of community conflicts in a situation of political instability (Chauveau and al.1998). The non-application of the principle of fairness is confirmed by the absence of a legal organisation of the rights of access depending on socio-economic practices. This legal organisation could also have as objective to formulate the statute law in a flexible way in order to include a certain number of community regulations having preserved their effectiveness. The principle of subsidiarity could guide this convergence between the two sources of law.

53. The non-application of the principle of fairness can also be explained by the lack of legal organisation of delegations of powers, whereas it is decisive to promote a coherent articulation between the devolved administrative departments in charge of fisheries and local communities. This objective claims that the State puts into practice a devolution of institutional and financial powers to devolved administrative departments as well as to local communities. The delegation of powers should relate to the management of conflicts which needs the creation of legal authorities of appeal close to the populations in order to fill up the present institutional gap.

54. The last reason of non-application of the principle of fairness is the weakness of the specific financing of governance measures concerning: (i) the preliminary consultations to produce the norms through procedural decision mechanisms which have a cost which must be included in the budget of the projects, (ii) the financing of compensations in response to the restrictions defined within the framework of a sustainable exploitation of fisheries resources since the application of these norms presents an opportunity cost for the social groups and a high direct social cost for certain populations, (iii) the costs of law enforcement, which can be high in situations where the means of production for the exploitation of the fisheries resources are of relatively high capital intensity.

4. Lessons learned for better fisheries and aquaculture governance : some guidelines

55. Some lessons can be drawn from the analysis of fisheries governance systems which were and which are encouraged by development assistance:

- ◆ First, a need for a new approach towards fisheries governance which goes beyond the framework of the fisheries management, so as to be able to take into account the power relationship between stakeholders and to propose methods for achieving the goals of the sustainable development (environmental, economic, social).
- ◆ Secondly, work is needed on the integration of fisheries or aquaculture development assistance programmes into national and regional public policies in order to avoid a lack of coherence of the sectorial policies, knowing the multiplicity of projects and the compartmentalization between resources conservation policy and socio-economic development policy.
- ◆ Thirdly, there is a need to rebuild the fisheries administration and strengthen the institutions to compensate for the weakening of the public authorities, and public actions, as well as for the fragmentation of this administration and of the civil society. This rehabilitation should allow a "requalification" of the States as arbitrator and guarantor. A condition is a reform of the central

and devolved administrative fisheries departments, so as to be more effective (debureaucratisation and fight against corruption).

4.1. A new approach to fisheries governance

56. Generally speaking, one is witnessing a recognition of the importance of the governance which leads to a new, more open concept of fisheries management. Indeed, the concept of governance not only makes it possible to discuss the role of the administration in the process of resolution of issues of a public nature, but also of the contribution which can be brought by other stakeholders in this process (communities of residents, communities of fishermen, NGOs, private agents). This recognition comes within a tendency to the decentralization of the authority and responsibility for renewable natural resources management, in particular with an aim of obtaining a firmer engagement of civil society in the decisionmaking process. The ecosystemic approach adopted as analytical framework by the Convention on Biological Diversity also recognises the importance of social, cultural, economic and institutional factors for the promotion of the nature conservation and invites to decentralise as much as possible the management of fisheries in particular.

57. However, the governance concept which is highlighted in the International Conventions does not inevitably correspond to the various social and institutional conditions characterizing the fisheries in developing countries. Indeed, its very general character gives rise to a re-appropriation either authoritarian, by the States preoccupied with the preservation of a political and economic control on the exploitation of fisheries resources, or “autochtonist” by the native societies with the objective to extend their territorial control to the detriment of other groups. This situation tends to create permanent tensions between vertical and horizontal modes of coordination.

58. Thus, the development of governance models, appropriate to the fisheries, needs the construction of an adequate analytical framework. The latter could be based on the conceptual knowledge of the governance of hazardous activities, on the application of this knowledge to the environmental governance, and on the characterization of this governance in terms of political economy and political science.

59. Focussing specifically on the governance of hazardous activities initiated by the European Commission within the fourth Framework Programme for Research and Technological Development at the end of the 1990s³, allowed a notable conceptual progress which essentially consisted in making a distinction between two models of governance: one is characterized by the “top-down” paradigm and the other by the “mutual trust” paradigm. For the participants in this programme, each model is also characterized by its own, implicit “rules of the game”. The government authorities, the experts and the stakeholders play a different part in it. In the same way, each model is defined by its own types of regulation and ethical values.

60. The first paradigm, known as “top-down paradigm”, stresses the central role of government authorities in the process of evaluation and risk management. Protectors of the general interest, the authorities work out in a centralised way specific prescriptive regulations for each type of risk in each context. The government authorities require optimal solutions, legitimized by the scientific knowledge.

61. The second paradigm known as of “mutual trust” puts forward the role of stakeholders in the definition and management of the common good. They take part, in a way as broad as possible, in the decentralized decision-making processes, previously defined by government authorities. These processes have a procedural dimension, which implies that the scientific knowledge, opened to all of the stakeholders, is not presented any more like the principal factor of decision.

³ The Programme TRUSTNET which took place from 1997 to 1999

62. For the participants in the above mentioned programme, the complementarity of the two approaches is essential. The “top-down” approach is effective in contexts where the decision-making process is not complex. The approach in terms of “mutual trust” is necessary for any context marked by uncertainty and complexity. Finally, the case studies in the field of hazardous activities show that the two forms of governance are often mixed up.

63. One author went back to this distinction established in the field of hazardous activities and applied it to the environmental governance (Froger, 2001). She insists on the chronological succession of the two paradigms, the evolutions of the environment policies in contexts having shown the incapacity of the model of the top-down governance to control in a correct way the access to natural resources.

64. According to this author, the top-down paradigm, which grants a considerable weight to the public decision, was justified in the historical context of the Welfare State, where the latter seemed to be the only guarantor for the general interest. In some ways one finds himself within an iterative model where the citizens can make pressure on the authorities only in a retroactive and indirect way, the State being indeed the only empowered institution to formulate arbitrations between short term and long term.

65. It is when the confidence in the Welfare State erodes in a durable way that the paradigm of the mutual trust stands out. That corresponds to a more “horizontal” model implicating the coordination of various stakeholders. The State tends to involve more stakeholders in the public decision-making, on which it does not have any more the absolute monopoly. In this model, the stakeholders take part in the decentralized decision-making processes and the arbitrations are carried out at various levels of consultation. The decision does not only belong any more to the authorities. One is engaged in the decision-making processes which are more procedural than iterative in order to better apprehend the complexity of the environmental phenomena and allow all of the social agents to define an acceptable ecological risk.

66. The governance, built around these two paradigms, can be characterized in terms of political science and political economy so as to come close to a model privileging coordination among social agents. In such an approach, the objectives of the sustainable development can only be achieved by joint actions led by the stakeholders, and the norms of sustainable development must be the subject of a process of social legitimacy. Thus, the environmental stakes require the implementation of a continuous process of negotiation among multiple stakeholders. It is the procedural dimension of collective processes of identification of environmental problems and decision-making which is asserted in such a theoretical scheme. However, to make effective the procedures of negotiation and coordination among stakeholders at various levels, it is essential that the State assumes its regulatory role. Moreover, the mutual trust among nonofficial agents is not obvious. It supposes that the State could be the guarantor for the decisions negotiated by the different stakeholders. Thus, to face the challenges of the sustainable development, it is necessary to find the ground between a vertical model and a horizontal one. The policies relating to sustainable development can only be effective by combining these two paradigms in a way adapted to the context of exercise of the environmental governance.

67. The combination of a vertical and horizontal approach appears very relevant to fisheries governance in West Africa. It offers, indeed, interesting opportunities of treatment of contradictions inherent to the implementation of a regulation of fisheries resources exploitation, on the basis both of an administrated model and of a decentralized model of management. One can note in fact that the management of the West African fisheries oscillate with varying degrees between these two models. Even if a “participative model”, particularly in vogue in the international organisations dealing with development, is the prevailing view, the fisheries are yet characterized by this duality. On one side one often notes the absence of a regulating authority charged to promote the coherence in management and to arbitrate the conflicts which appear in the exploitation of fisheries resources: sometimes the top-down

paradigm seems to be neglected, indeed even wiped out, by the modes of intervention of the international special interest groups. On the other side, one observes some hesitation of national institutions to fully delegate their competences in fisheries resources management to the local institutions: the paradigm of mutual trust cannot assert itself if there is not a sufficient questioning of the administrative authorities.

68. A combination of the top-down paradigm and the mutual trust paradigm should make it possible to arrive at a transparent and equitable governance. This combination would permit a compensation for the deficit of regulation of conflicts relating to the access to fisheries resources and the inconsistencies of management, knowing that the actions of special interest groups tend to erode the capacity of regulation of the State, and in particular its arbitration function. By reinforcing the community authorities, the special interest groups are not very preoccupied with the balance of powers within communities or between communities. In this way, they do not contribute much to a possible articulation between the two paradigms of governance (top-down and mutual trust), and tend to privilege a conservationist approach to the detriment of a broader conception of sustainable development while not bringing the necessary means to compensate the restrictions.

4.2. The integration of fisheries or aquaculture development assistance programmes into national and regional public policies

69. On a national scale, the integration of the fisheries development assistance programmes to the national public policies is essential, taking into consideration the very sectorial nature of these programmes. It is advisable to integrate these programmes into the global public policies on a national scale. This integration refers to the proclaimed objectives of which the most important are the poverty reduction, the environmental protection and sustainable development.

70. The integration of the fisheries development assistance into the national public policies is supposed to ensure the complementarity among sectorial policies so as to avoid a lack of coherence of the economic policies. Given the multiplicity of the projects, the fisheries development assistance programmes should be articulated on a national scale within the poverty reduction strategy framework, specially since it is expected that the coastal areas concentrate a great number of development programmes. As an example, since 1998, Mauritania has belonged to the countries which benefit from the Heavily Indebted Poor Countries Debt Initiative and so has an important opportunity for financing development programmes. Within this framework, the Mauritanian Government worked out in 2001 (on the basis of a broad national consultation) a "Poverty Reduction Strategy Framework by 2015" which constitutes the reference document for economic and social development policy of the country. The present challenge of the country is to reduce significantly the poverty, while bringing back its incidence to a rate of 12% by 2015 and by mitigating its most degrading impacts.

71. The integration, which should also be done with the environmental protection and sustainable development policies, would contribute to the de-compartmentalization between the policies of conservation and those of development. It could favour a legal harmonization of enforcement actions and regulation of the access, a redefinition of the role of certain institutions, a limitation of competition among administrative departments. The National Strategy of the Environment and Sustainable Development in Mauritania (UNDP, 2004) was elaborated in 2004. It was decided that it would take a double form: a National Strategy of Sustainable Development and a National Action Plan for the Environment and the Sustainable Development. The first, the National Strategy of Sustainable Development concentrates simultaneously on the global rationale of sustainable development, on the highlighting of stakes on a national scale and the nature of their interdependences, on the need for articulating in a coherent way this objective within the reference framework for the development of the country worked out in 2000 i.e. the Poverty Reduction Strategy Framework. From the point of view of the temporal scales, this National Strategy of Sustainable Development represents a vision over ten years and, thus, is adjusted to the year

2015 as the Poverty Reduction Strategy Framework and the Millennium Development Goals. The second, the National Action Plan for the Environment and the Sustainable Development, aims, on the basis of diagnosis of the state of the environment in Mauritania and of its management, to identify, to formulate and to plan all of the actions necessary for implementing an environmental policy in conformity with the concept of sustainable development. It lists the priority axes defined by the National Strategy of Sustainable Development in the form of operational objectives, principal activities, mechanisms and deadlines of implementation. It falls under medium term, five years, and so comprises only actions being able to be carried through to a successful conclusion during this period.

72. The integration, on a regional scale, starting from the fisheries development assistance programmes to the public policies expresses itself in terms of articulation in a coherent way of each programme with the regional public policies, but also in terms of coordination of the various programmes.

73. For the programmes relating to the fisheries to be applied with the regional public policies it requires to transcend from the narrow national framework. Difficulties of various nature are opposed to it: the absence of harmonization of institutional frameworks, the disparity of natural resources conservation policies, or even the obstacles to the economic integration. An example of an efficient articulation of the management programmes with the regional public policies, of which the fisheries could be inspired, is the support program to the integrated management of natural resources of Niger and Gambia Basins, which plans to speed up the harmonisation of the forestry legislations of the different countries as well as the harmonisation of control and regulation mechanisms of the forest products cross-border flows.

74. The weakness of the regional coordination regarding the management of marine and coastal protected areas results in the absence of regulation mechanisms applicable to cross-border migratory movements as to those related to the small-scale fishery between Saloum Delta and Bijagos Archipelago, or those relating to the fishing and the smoking of ethmaloses between Guinea and Bijagos Archipelago. A true coordination passes through a constant and framed co-operation among States. To this end, the Sub-Regional Fishery Commission (SRFC) could take part in the mutualisation of all of these interests, under condition of reinforcement of the limited resources and powers they have at their disposal. This cooperation can also be carried out in network, in the image of that carried out by the specialized organizations within the framework of the regional Programme of conservation of the coastal and marine zone in West Africa (PRCM) on the initiative of international NGOs and intergovernmental organizations.

4.3. The rehabilitation of the fisheries administration and the strengthening of institutions

75. The requalification of the role of the State in its functions of arbitrator and guarantor aims at compensating for a certain marginalization of administrative departments and their loss of legitimacy in a context characterized by the dominating role of international organisations. One understands, by international organisations, the international NGOs (IUCN, WWF, Wetlands International etc...) and the international institutions (World Bank, ADB, UNDP, UNEP, FAO etc...). Indeed, for a few years, these organisations have carried their financial effort mainly on the reinforcement of specific groups, such as socio-professional organisations or social associations which are constituted in special interest groups. These international organisations try to limit the weight of a governance system based on the top-down paradigm by setting up and supporting fishers, fish traders or traditional processors organisations. Thus, the analysis of the West African fisheries governance revealed the disproportionate role of special interest groups. Concomitantly, one attends the weakening of administrative departments which is prejudicial insofar as it prevents the rise of a management of a public nature.

76. The necessary articulation of the various power and decision levels leads to requalify the role of the State in the fisheries governance. For example, the strong mobility of fishing activities on the West African littoral supposes to go beyond the local framework and to consider the interactions among fisheries

at local, national and regional level. In fact the States have the adequate mediatory institutions at a national level or can delegate to regional institutions, like the Sub-Regional Fishery Commission (SRFC). Indeed, the underlining of interactions among fishers communities requires an implementation of consultation mechanisms as well as regulations at a regional level. Particularly since the regional integration of public policies pose some problems due to the disparity of regional institutional frameworks (CEDEAO and UEMOA), to the lack of application of regulations, or even to the inefficiency of some regional institutions (Dahou et al., 2003).

77. The State is in charge of the mediatory institutions not only in terms of scale (local, national, regional) but also in terms of timing. The concept of sustainability resulting from the International Conventions is precisely based on the articulation of the short and the long term. It is a question of being able to perpetuate the livelihoods of communities depending on the exploitation of fisheries resources, while ensuring the reproduction of the resources in the long term. (Morand and al., 2005; Allison and Horemans, 2006). This idea also conveys a principle of fairness in the allocation of resources over generations. It is the State, after having engaged a process of negotiation, which has the legitimacy to carry out these decisions on a long term and which can ensure their efficiency through a budgetary planning. A multi-annual planning allows to join a short term objective, such as the reduction of poverty, and a long term objective, such as the restoration of fisheries resources.

78. Another reason for the requalification of the State is its potential role in the prospective and the implementation of sectorial arbitrations. At the national level, the public policies focused on fisheries have to refer to Poverty Reduction Strategy Papers (PRSP) which affirm the necessary complementarity between sectorial development policies and dictate the guidelines of development policies, including the fisheries sector. As long as these arbitrations will not be carried out by the States, it is difficult to imagine how the high level of exploitation of fisheries resources could decrease. Nevertheless, in order that these arbitrations would be effective, they must necessarily be based on consultation mechanisms, given the dead-ends of a governance system referring only to the top-down paradigm. This failure has been observed in the case of the European Union fisheries management, observing that the administrative departments of European States did not succeed in preserving the fisheries resources (Hatcher and Robinson 1999). It was also noticed in the case of marine protected areas management (Hilborn and al. 2004). In such a context, only procedures of governance referring to the paradigm of mutual trust are likely to re-legitimate the public actions and to reinforce the coherence of public policies.

79. Generally speaking, making up for the deficit of administrative legitimacy is conditioned by a greater efficiency of central and devolved administrative departments. A better efficiency induces a de-compartmentalization of projects, a transparency of the procedures and a reduction in the national and international bureaucracy. These changes also require an evolution of administrative duties, currently too confined to control and enforcement. These duties must evolve in parallel to the programmes of local development and participatory management projects which induce an increase in manpower posted to fisheries administrative departments. Concomitantly, a significant effort regarding infrastructures have to be carried out.

80. The strengthening of the institutions can result in the creation of new institutions and in the setting up of new instruments of management. With the example of the Guinea-Bissau, the creation of new institutions, such as the National Institute of the Environment (INE) and the Institute of the Biodiversity of the Protected Areas (IBAP), must allow to focus the public policies on sustainable development and to reaffirm national sovereignty.

REFERENCES

- Allison, E.H., B. Horemans (2006). « Poverty, vulnerability, sustainable livelihoods and the management of small-scale fisheries » in D. Greboval (ed.) *Third International Workshop on Factors of Unsustainability in Fisheries, Siem Reap, Cambodia*. FAO, Rome
- Bavinck, M., R. Chenpagdee, M. Diallo, P. van der Heijden, J. Kooiman, R. Mahon, S. Williams (2005). *Interactive fisheries governance*. Delft : Eburon Publishers. 72 pp.
- CECAF (2004). *Report on the third session of the Scientific Committee*. Lomé, Togo, 24-26 February 2004.
- Chauveau, J.-P., Bosc, P.-M. et Pescay, M. (1998). Le Plan foncier rural en Côte d'Ivoire. Dans Lavigne Delville, Ph., éd. *Quelles politiques foncières en Afrique? Réconcilier pratiques, légitimité et légalité* (553-582). Karthala-Coopération française, Paris.
- Dahou T. et al. (2003). La Sénégambie méridionale, dynamique d'un espace d'intégration partagé entre trois Etats, ENDA/OXFAM
- Dahou, T., JY. Weigel (2005). « La gouvernance environnementale au miroir des politiques publiques : le cas des aires marines protégées ouest-africaines. » *Afrique contemporaine*. N°213, hiver 2005. Editions de Boeck Université. Bruxelles.
- Dème M, Dahou K. (2001). « Les implications du commerce international et des contraintes monétaires sur la gestion publique des ressources halieutiques des pays de l'Afrique de l'Ouest ». Atelier « Enjeux ». Conakry, Guinée, 24-26 septembre 2001.
- FAO. (2003). « Rapport et documentation de l'Atelier de réflexion sur la gestion des capacités de pêche en Afrique de l'Ouest. Saly Portudal, Sénégal, 25-28 septembre 2001. » *FAO Rapport sur les pêches N° 707*. Rome.
- FAO (2000, 2001, 2003, 2004, 2005). *Fishery Country Profile. Mauritania. Senegal. Gambia, Cabo-Verde. Guinea-Bissau. Guinea. Sierra-Leone*. Rome.
- Froger G, 2001. « De l'usage de la gouvernance en matière de développement durable », in G. Froger (ed.) *Gouvernance et développement durable*, Helbing et Lichtenhahn 2001
- Galetti F. (2002). « Les transformations de l'Etat et du droit public en Afrique francophone » Thèse de Doctorat. Université de Perpignan.
- Gascuel D., M. Laurens. (2001). « Evaluation des stocks par l'approche globale et évolutions d'abondance. Synthèse du groupe de travail « Analyses monospécifiques » de Mindelo (octobre 2001) ». *Archives de documents de la FAO*. Rome.
- Greboval, D. (2003). « The Measurement and Monitoring of Fishing Capacity : Introduction and Major Considerations », *Measuring Capacity in Fisheries, FAO Fisheries Technical Paper N°445*, Rome.

- Hatcher A. and Robinson K. (1999). *Management institutions and governance systems in European fisheries*, CEMARE.
- Hilborn R. and al. (2004). "When can marine reserves improve fisheries management?", *Ocean and Coastal Management* 47 (2004) 197-205.
- MEPM (2003). *La pêche artisanale et côtière. Diagnostic*. Ministère des Pêches et de l'Economie Maritime. Nouakchott, Mauritanie.
- MEPM (2005). *Etude sur les voies et moyens de développement de la pêche artisanale et côtière en perspective du plan d'aménagement de la pêche artisanale et côtière. Rapport final*. PARSY. Ministère des Pêches et de l'Economie Maritime Nouakchott, Mauritanie.
- Morand P., Sy O.I., Breuil Ch. (2005). « Fishing Livelihoods : Successful Diversification, or Sinking into Poverty ? ». In. *Towards a New Map in Africa*. Edited by Ben Wisner, Camilla Toulmin and Rutendo Chitiga. Earthscan. London, Sterling VA. Pp. 71-96.
- Neiland A.E., N. Soley, J. Baron Varley, D.J. Whitmarsh (2002). "Shrimp aquaculture : economic perspectives for policy development". *Marine Policy* 25:4.
- Platon R. (2001). *Mangrove friendly shrimp culture technique : research plan for Thailand*. SEAFDEC. Iloilo.
- PNUD. (2004). *Stratégie nationale de l'environnement et du développement durable en Mauritanie*. Cellule 21/PANE. Mai 2004.
- OECD. (2000). *Transition to Responsible Fisheries. Economic and Policy Implications*. Paris.
- Thorpe, A. (2005). "Mainstreaming Fisheries into National Development and Poverty Reduction Strategies: Current Situation and Opportunities". *FAO Fisheries Circular N°997*.
- UNDP. (1996). *Decentralised Governance Programme*, New York.
- Weigel, JY. (1994). « Shrimp Culture Encroachment and the Environmental Movement in Thailand» *Journal of Social Research*. Vol 17 N° 1. Chulalongkorn University Social Research Institute. Bangkok.
- Weigel, JY (ed.). (1998). « La pêche en Afrique : enjeux et défis ». *Afrique Contemporaine*. N°187. Juillet-Septembre 1998. La Documentation Française. Paris.
- Weigel, JY. (1999). « Dynamiques d'exploitation et de valorisation des petits pélagiques marins en Afrique de l'Ouest. » *FAO Document technique sur les pêches*. N°390. Rome.