



Position Paper

Linking coastal financial investment with resource development and conservation

Summary

The Paper looks at the need and feasibility of exploring the linking of coastal financial investment with resource development and conservation along the coastal zone in Pakistan. It assesses the present scenario of utilization of coastal resources for financial benefits. Identifies the constraints and highlights the potentials of both enhancing benefits from existing resource utilization and also indicates new forms of extracting socioeconomic benefits by investing in coastal land and resources through a participatory collaboration between government, private sector, communities, the media etc. The Paper also outlines a 'roadmap' and 'policy and implementation framework' and implementable models for establishing a 'coastal zone financial investment plan'.

A) Background

Apart from the multifaceted economic activities taking place in Karachi vicinity, most of the economics associated with the coastal regions of Pakistan centre around fishing / forestry and related businesses. Fisheries in Pakistan are concentrated in shallow coastal waters, the estuarine system of Indus and associated creeks and to a lesser extent, in the deeper part of the ocean. Major part of the fishing fleet of Pakistan confines its activity to coastal waters up to 20 – 25 miles from the coast due to lack of adequate navigational aids and small sized fishing crafts with practically no storage / catch preservation facilities.¹

Traditionally, agriculture, forestry and fishing played almost equal roles in the socio-economic patterns of the coastal communities. However, it is largely held that the lesser availability of fresh water (damming and diversion of Indus water upstream for agriculture) and the mechanization of the fishing industry has caused fishing to become the dominant economic pursuit and forestry and agriculture, particularly forestry have decreased in importance.

1. United Nations ESCAP in Co-operation with Environment and Urban Affairs Division, Government of Pakistan / National Institute of Oceanography, Government of Pakistan) – 6390 – Coastal Environmental Management Plan for Pakistan

However, the forestry sector continues to play a role in the life of the coastal communities. The role of the forests is primarily local in character. They only meet the routine needs of the local communities for fuel, construction material and fodder.

Agricultural activities are still widely practiced in the coastal parts of Thatta/Badin Districts and in the Hub area with the major crops being rice, pulses, vegetables and fruits.

According to an estimate, Pakistan has a fish and seafood industry worth \$1.2 billion. Exports alone are worth nearly \$213 million per annum. More than 0.8 million people rely directly or indirectly on the industry for their livelihood. Fisheries and allied industrial activities are the most important economic activities along the coast of Sindh and Balochistan supporting livelihood of about 1.0 million fishermen and their families living in rural villages under difficult conditions. Fishery also is an important sub sector of the agriculture sector in Pakistan. Fisheries activities in coastal areas of Sindh are at present concentrated at Karachi Fish Harbor and to a lesser extent at the Ibrahim Haidari Harbor. The Karachi Fish Harbor is situated on the west side of Karachi port.

A fish harbor has been constructed at Korangi but has still not been operationalized. Shrimp fishing is the most important specie in terms of economic returns on the Sindh coast in terms of financial returns. Main earnings are through exports.

Fisheries are also an important activity in Badin. About 10 percent of the overall marine fish exports originate from Badin. The district is also considered to be among the most productive in Sindh for freshwater fisheries. Sindh inland fisheries statistics for 2002 revealed that out of the total fish production of 80 659 tonnes, some 14 152 tonnes or 17.5 percent was produced in Badin, which was second only to Thatta District in inland fish production. In Balochistan, fish harbors are located at Pasni and Gwadar. Fishing remains the predominant means of livelihood in Gwadar. In fact, some 70 percent of the district's total labor force is employed in the fisheries sector. In terms of statistics, there were 30,660 fishermen in the district in 2002. More than 8,000 fishermen were based in Pasni. Fulltime professionals made up 66 percent of the total, 23 percent were part-timers and the remaining 11 percent were occasional workers in the sector. In 2002, the total catch on the Gwadar coast was 105,609 tonnes, valued at an estimated 3,408 million rupees. The potential of freshwater fisheries in Lasbela District has not been studied yet.

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² *Enterprises Based Fisheries Sector Study and Strategic Plan for Interventions at Enterprise's Level to Enhance Quality production, United Nation Industrial Development Organization, Trade Related Technical Assistance (TRTAII), Final Report, 2010, Dr. Nasim Akhtar, Fisheries Sector Expert.*

³ *District Vision Badin, A Framework for Sustainable Development, 2006, District Government Badin, Government of Sindh.*

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Forests

As mentioned earlier, forestry does not function as an activity of any significant economic value along the coast. The forests such as mangroves serve the local needs of fodder, fuel wood, and house construction. The coastline of Pakistan is essentially arid, with low rainfall, mostly falling during the monsoon period (April to September). This climatic factor plays an important role in the distribution and structure of mangroves in the country. The largest area is found in the Indus Delta, almost completely made up of *Avicennia marina*; the remainder is mostly restricted to small patches in bays and small seasonal river mouths. In undisturbed areas and where the factors permit it, trees may grow up to 10 m in height ⁵.

There is no evidence of it being marketed even a short distance inland because of high transportation costs. However, they do serve as nurseries for fish and shrimp. Their recreational and tourism potential remains unutilized.

Aquaculture

Aquaculture is a rather recent activity in Pakistan and is still in its infancy; nevertheless there is immense potential for development of the sector. Despite its vast fresh, brackish and marine water resources only carp culture is practiced in inland waters and only on a limited scale, carp are cultured in earthen ponds, using mostly extensive farming practices with very little inputs.

In Pakistan, the fish fauna is rich but only seven warm water species and two cold water species are cultivated on a commercial scale. Trials experimenting with shrimp culture have been carried out in the Indus delta region but it did not succeed due to the non-availability of hatchery-produced seed.⁶

Industry

About 70% of the total industry of Pakistan is located in Karachi city. The major industry comprises textiles, chemicals, pharmaceuticals, electronic goods, food, oil refineries, tanneries, iron and steel, thermal power generation etc. The total number of industrial units is estimated to be about 6,000. No industrial activity of any significance occurs anywhere else along the coast other than in Karachi.⁷

An industrial activity though not conducive to the local ecology and environment does operate on the Gadani coast of Lasbela that is the Gadani ship breaking industry. It is currently managed by the Balochistan Development Authority (BDA).

Fishing activity in the coastal waters of Gadani has finished due to the ship-breaking industry⁸.

⁴ Lasbela Integrated District Development Vision, 2011, Government of Balochistan

⁵ Global Forest Resource Assessment, Thematic Study on Mangroves, Pakistan – Country Profile, 2005, Forestry Department, Food and Agriculture Organization (FAO) of United Nation

⁶ National Aquaculture Sector Overview in Pakistan, 2010, Fisheries & Aquaculture Department/Food and Agriculture Department of the United Nations (FAO)

⁷ United Nations ESCAP in Co-operation with Environment and Urban Affairs Division, Government of Pakistan / National Institute of Oceanography, Government of Pakistan) – 6390 – Coastal Environmental Management Plan for Pakistan.

⁸ Lasbela Integrated District Development Vision, 2011, Government of Balochistan

Shipping/Trade

Karachi Port and Port Muhammad Bin Qasim (both located in Karachi City) are the main ports of Pakistan and form the inlet and outlet points of almost all of the countries imports and exports. The government's decision to construct a deep seaport and offer incentives for investment has led to rapid growth in the district. Gwadar has witnessed major changes in economic activities. In recent years on account of a large influx of people that has increased demand for all civic necessities and services. Construction activities have increased considerably as has employment. The most important project in this sector was the construction of MCH that ended Gwadar's isolation and reinforced investor confidence. The establishment of GDA has provided impetus to the development of infrastructure and given direction to the development process and urbanization⁹.

Tourism

The coastal belt of Pakistan, with the exception of some basic recreational infrastructure / outlets along the Karachi coast, is presently not served with tourism related infrastructure. However, the potential exists. Most of the coastline exhibits rocky and sandy beaches.

There is mangroves ecology and Sandspit/Hawksbay beaches in Karachi are globally acknowledged as one of the most important 'Green Turtle' nesting sites in the world. The Indus Deltaic coast has numerous islands and harbors. The network of creeks and islands offers a sound potential for developing holiday resorts featuring a variety of water sports and nature tourism. However, tourism related facilities and infrastructure are non-existent. There are a number of historic and ecological sites and prehistoric settlements in the Lasbela District.

The most important prehistoric settlements in Lasbela District are Adam Buthi, Niai Buthi, and Balakot, which are located 80 km. south of Bela on the Khurkera plain. The tomb of General Muhammad-Ibn-Haroon, who accompanied Muhammad-Bin-Qasim, is a place of historical importance in the town of Bela.

On the western side of the Porali River is the tomb of Sir Robert Sandeman, made of granite and white marble and surrounded by beautiful gardens, which bears testimony to the cultural heritage of this town. There is a spring called Sassi Waro-Chodo (Sassi's Spring), the heroine in the romantic legend of Sassi and Punnun. The tomb of Shireen and Farhad is also located here; they are buried in one grave. It is believed that Hinglaj Maata, a site in Hingol National Park (HNP), represents the remains of the skull top of the Goddess Sati, the divine consort or Sati of the God Shiva.

The specific sites of worship for Hindus in the Hinglaj Mata gorge Chandargupt mud volcano, Aghore Pooja, Ashnaan (bathing by males and female separately) at the crossing of the Hingol River for Hinglaj gorge, and Liari Pooja. In the Hinglaj gorge, the sites of worship are Ganesh Pooja (at the raised bank of the Hinglaj stream, where the new main parking area is proposed across the stream), which is a worship place and sacred pond.

However, again because of lack of infrastructure and facilities, and lack of effective promotion have blocked any efforts to develop these sites as viable tourism attractions¹⁰.

⁹ Gwadar Integrated Development Vision, 2007, Government of Balochistan.

¹⁰ Lasbela Integrated District Development Vision, 2011, Government of Balochistan

B) Factors Preventing Coastal Economic Development

All over the world, there are presently many avenues and options being considered to obtain socio-economic benefits by investing in environmentally sound coastal planning and development. An important element of the Integrated Coastal Zone Management (ICZM) network is the optimization of financial benefits that can be gained from sound financial investment for the community up to a national development level. There is a totally un-explored and potentially very beneficial area for partnership and collaboration that exists between our 'coastal managers' and the 'private sector' for investing both in measures for preservation and conservation and also optimal and environmentally sustainable utilization of the potential financial benefits that can be extracted from coastal land and resources. However, there is a need for collaborating meaningfully with the relevant private sector enterprises – for example financial investment entities/banks, companies specializing in energy extraction and production,

recreational and tourism sites development and management enterprises etc.

This collaboration can manifest in working out the broad outlines of a 'coastal zone financial investment plan'.

However, the problem is how this collaboration will work. A multi-tiered and multi-sectoral policy and administrative framework of local, provincial and federal agencies operate all along Pakistan coast but without any coherent approach or coordination.

Most of the planning, development and conservation efforts are ill coordinated. In the absence of appropriate legislation, designated responsibilities, well-defined procedures and the means of institutional capacity building, management of marine and coastal areas is in disarray. Non-government organizations such as IUCN, WWF, Shirkat Gah are actively involved in this sector and have worked out model conservation projects with some tourism and financial benefit components with co-operation of the local coastal inhabitants. However, the limited resources of NGO's cannot possibly influence the vast coastal and marine areas of the country without the full backing of state authorities. Pakistan EEZ is almost equal to the landmass of the country. Legislative support with specific regulations needs to be updated for marine and coastal management including financial investment with the possibility of setting in place newly created administrative bodies or agencies.

Some possible areas for focusing 'Private sector investment and partnerships'

- Upgrading and modernizing the fishing industry related infrastructure and allied facilities and setting 'standards' for fishing practices
- Establish environmentally sound 'tourism related facilities' – A comprehensive planning proposal, namely the Karachi Coastal Zone Management and Planning (Coastal Recreational Development Plan) already exists as a workable reference document.
- Preserve and promote sites of 'archaeological' interest and value along the coast
- Invest in setting up energy producing projects such as wind and power energy production (example offshore windmills)
- carbon' reserves
- Utilizing mangrove forests for 'honey bee' plantation and exploring the 'carbon credit' potential of mangroves
- Enhanced and well researched investment in Aquaculture ponds - prawn/shrimp, crab, and seaweed cultivation
- Exploring medicinal and commercial value of sea-weeds and other marine flora including fuel extraction potential from algae
- Promotion of local and indigenous 'arts and crafts'.
- Potential of extracting and utilizing 'hydro carbon' reserves
- Optimal utilization of 'solar salts'

C) A Policy And Implementation Roadmap

A possible 'roadmap' for establishing a 'coastal zone financial investment plan' can unfold as follows:

- Assembling relevant expertise for outlining potential areas for private sector investment and 'economic valuation' of ecological and financial benefits.
- Undertaking action on required 'amendments' at the 'policy' and 'legislation' sphere for making 'viable' the promotion, management and regulation of private sector investment and 'collaborations' that can facilitate sustainable conservation and utilization of coastal land and resources

- Establishment of relevant 'institutional interfaces' or the setting up of additional institutions, for linkage of the private sector and communities with agencies dealing with coastal land and resources - example land owners/service providers/regulators etc.
- Indicate potential areas where private sector expertise can contribute to 'capacity building' of relevant government agencies – example human resource development, strengthening access to technology – acquiring state-of-the-art equipments and logistical support
- Identify possible 'models' for collaboration and partnership – distribution of roles, responsibilities and functions – financing, development, management, re-investments of revenues etc.

Other than the direct project related investments indicated in the Box, other indirect benefits can come if financial investment is made in areas such as improved coherent spatial planning, increase in public awareness and capacity building, habitat restoration, more sustainable fisheries, reducing pollution, landscape improvement and reduced flooding and erosion among other benefits. All these interventions can even form part of a large scale 'Sea front and coastal restoration plan'.

D) A Possible Implementation Framework

The process needs to be participatory. Key stakeholders to be involved in the process of consultation and evaluation on the modalities of private sector investment may include the Federation of Pakistan Chamber of Commerce and Industry (FPCCI), city based chambers of commerce and industry such as the Karachi Chamber of Commerce and Industry (KCCI). In addition, those private sector entities that have a history and credibility of investing in progressive environmental improvement and conservation programs (example – pro-active Corporate Social Responsibility - CSR - Programs) should be approached in this consultative process. A framework for reference and adaptation could be the 'The Green Development Mechanism (GDM)' that is the working name for an innovative financial mechanism that was put forward in the 'COP 10' of the CBD at Nagoya, Japan in 2010. GDM aims to mobilize private finance by linking biodiversity supply with biodiversity demand through a market mechanism.

For instance, by establishing a standards and an accrediting process for certifying the management of geographically-defined areas in accordance with the CBD, and by facilitating a functional market for those areas, a GDM would enable the financing of GDM-certified areas by willing businesses, investors, consumers and other interested parties such as private foundations and NGOs. A GDM, through developing a new market-based process, could enable 'biodiversity exporters' from developing countries to secure new international funding for their projects.

The Friends of Indus Forum

OUR VISION

Ensuring prosperity for current and future generations of Indus Basin, particularly lower riparian, through co existence and harmony with nature.

AIM

To address multiple factors that threaten the natural eco systems in which survival of species is becoming increasingly difficult and in which dependent communities are pushed to poverty and despair

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