

The Blue Economy in Karnataka

Exploring the Socio Economic Political
and Ecological Implications on the
Coastal Communities



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Chapter II

Introduction

The state of Karnataka lies on the Arabian Sea coast, and is bounded by Goa in the north and Kerala in the south. Its coast comprises of three districts – Dakshina Kannada, Udipi and Uttara Kannada, with a total fishers population of 1,57,989 spread across 162 fishing villages covering the entire coast from Majali in the north to Talapady in the south. With 115 landing centres and 9 fishing harbours, the State had marine fish production of 4.14 lakh tonnes in 2017-18.

Profile of the Coasts and Communities

The State has 300 km of coastline with a shallow and gradually sloping continental shelf for almost 80 kms (on an average) spanning over 27,000 sq km continental shelf area, rich in pelagic fishery resources. Traditionally Karnataka coast was known as “mackerel coast”(Viswanatha et al, 2015)¹. The coastal plains are narrow with a maximum width of 60 kms nestled between the Western Ghats and the Arabian Sea. Rocky headlands and sea cliffs are present along the northern part of the State with the prevalence of pocket beaches and bays (NCCR, 2018)². Fourteen rivers including Kali, Gangavali, Bedti, Tadri, Sharavati, Netravati originate in the Western Ghats and their tributaries flow through three coastal districts into the Arabian Sea, forming a mosaic of more than 8,000 ha of estuaries along the coast and render the inshore area rich in nutrients (Bhatta et al, 2003)³. There are a number of uninhabited small Islands off its coast which are dense in corals and seagrass ecosystems such as Nethrani Island off Bhatkal and Devgad and Kurumgad Islands off Karwar.

Fisheries has been a traditional livelihood for communities of the Karnataka coast for ages. The traditional fishing communities consisting of several castes such as Kharvi, Ambiga, Gavit in Uttara Kannada district and Mogara, Bastha, Bhovi castes in Udipi and Dakshin Kannada districts⁴. Types of craft commonly used by traditional fishermen were rampani boats, dugout canoes and out-rigger boats, which are still suitable for the shallow coastal waters. Popular gears used by artisanal fishermen include rampani, small shore seines called kairampani, gillnets, drift nets and hooks and lines (Kurup et al, 1987)⁵.

Developments on the Coasts

Marine Fisheries

Fisheries development began in a major way in 1966, when a scheme for the construction and distribution of trawlers was introduced through the Dakshina Kannada District Cooperative Fish Marketing Federation of Karnataka (Bhatta, 2003). In the late 1970s, mechanised purse seine boats and gillnet boats were introduced with several bank loans attached schemes. The number of purse seine boats went from 2 to over 100 from 1976 to 1982. The corresponding reduction of traditional Ramponi nets (beach seine) reduced from 160 to below 20 over the same six-year period. The Government of Karnataka also introduced “Ramponi Scheme” to shift traditional Ramponi groups to own purse seine boats through loans and subsidies (ISST, 1985)⁶. In 1981, the Indo-Denmark Fisheries Modernisation Programme was also instrumental in modernisation of fish marketing and value processing initiatives. Deepsea fishing was also initiated in Mangalore in the early 1980's (CMFRI)⁷. The traditional ‘rampani’ nets, which once accounted for 50-60 per cent of the annual catch, have almost disappeared.

Port-led Industrialisation

New Mangalore Port (NMP), the major port was officially opened north of the city in 1975 to bring in equipment and raw materials for the state-owned Mangalore Chemicals and Fertilisers and also with the initiation of another PSU, Kudremukh Iron Ore Company Limited, which mined Iron Ore in Chikkamagalur district. KIOCL had its

processing and pelletisation plant in Mangalore, which was exported to countries like China, Iran, Japan, and Taiwan from NMP.

In 1994-95, Mangalore Refinery and Petrochemicals Limited (MRPL), established its first refinery just north of Mangalore. By 2004, there were over 22 large-scale and medium-scale industries and 18,009 small-scale industries in Dakshin Kannada district alone mostly concentrated just north of Mangalore (KSPCB, 2004)⁸.

In the 1980's, the calm and deep Bay waters of Karwar was also chosen as a strategic location for India's largest **Naval Base** for its operations on the western coast, known as **Project Seabird**. Land acquisition was done in the 80s displacing five fishing villages as well as farmlands. Several delays finally led to completion and commissioning of the Naval Base as INS Kadamba only in 2005. In the meanwhile, the landowners who lost lands had been fighting legally for fair compensation for almost 3 decades. The Karnataka High Court affirmed their right to fair compensation on 14th August 2015 in the writ petition MSA No. 571/2013 (LAC)⁹. They even filed PIL in Supreme Court¹⁰ as the government did not abide by previous rulings on fair compensation to the petitioners. Finally, as of February 24th, 2018, the Defence Ministry released funds for the agreed amount, and this legal issue of compensation was addressed.¹¹.

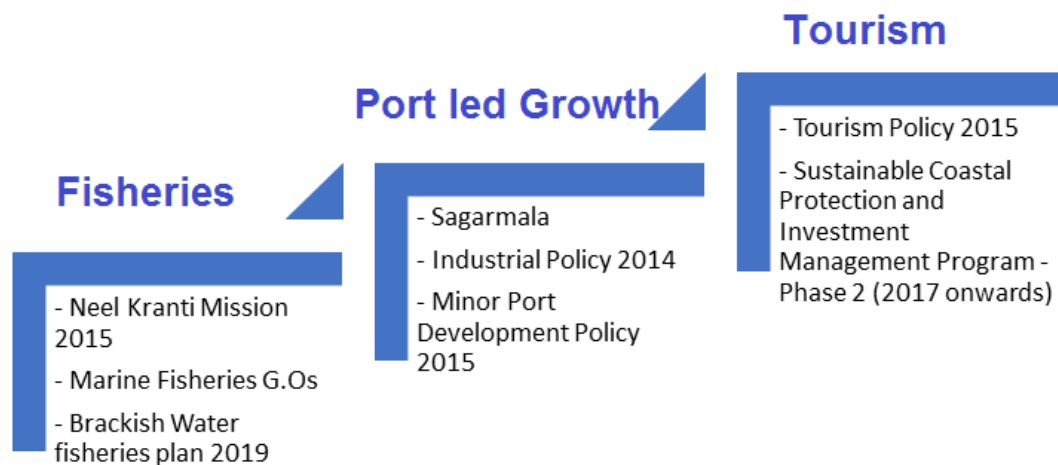
Coastal Tourism was also promoted in the 1990s itself. Vast areas along coastal Karnataka were designated as Special Tourist Areas (STAs), where powers of the local panchayat were severely restricted. Several projects were planned all across beaches in coastal Karnataka including Taj Hotels' Beach Resort in Majali, Uttara Kannada district. These places adjoining Goa were especially seen as better retreats from the increasingly crowded Goan beaches (Equations, 2000)¹².

Thus, these go to show that even before the formal onset of Blue Economy, the Karnataka coast has been a hub of infrastructural and developmental activities especially active in components like port-led industrialisation, militarisation and modernised marine fisheries. **Marginalisation of traditional SSF** has been so much so that by 1996 itself, mechanised purse seiners and trawlers accounted for 88% of the annual fish catch (Mohamed et al, 1998)¹³.

Infrastructural and industrial development on such a scale has had several impacts over the pristine ecosystem as well as the traditional livelihoods described above. Environmental studies highlight the pollution load due to runoff of the sediment, waste from oil refineries, nutrients and pesticides, iron ore residues from the nearby iron ore companies and chemicals from the petrochemical factories, resulting in the seas off Mangalore turning alkaline as well with low dissolved oxygen (Andrade et al, 2011)¹⁴. Capture fisheries trends indicate a fish famine both in terms of change in species combination resulting in decline of hitherto commercially important fish as well as those traditionally consumed by local communities (Bhatta, 2003).

Adoption of BE in Karnataka

Since 2014, the Union Government has promoted Sagarmala, Neelkranti, Swadesh Darshan and several BE components through its central schemes. Following this, a whole of host of new policies and centralisation of powers have been adopted in the State of Karnataka as well, focussing on the same components. We shall review the BE components such as port-led development, fisheries, and coastal tourism, for the purpose of the study.



BE Related State Polices and Legislative Framework

Fisheries	
Marine Fisheries G.Os	<ul style="list-style-type: none"> • HD/373/SST/2013: Giving the coastal police powers to act on illegal fishing practices under Marine Fisheries Regulations Act instead of the fisheries department¹⁵. • AHF/158//2016: Ordered a ban on Bull Trawling¹⁶ • On 25/03/2017, It issued a Notification to ban LED Fishing by Government of Karnataka¹⁷ mostly aimed at purse sieners. • AHF/49/SFS/2018 : Mandating the usage of 35MM square mesh cod end all trawl net¹⁸. • AHF/157/SFM/2018 : In keeping with CMFRI guidelines on juvenile fishing, Karnataka also passed orders on Minimum legal size, species wise for fish caught¹⁹.
Brackish Water Fisheries Plan ²⁰ 2019	<ul style="list-style-type: none"> • Aims to utilise the 8000 Ha of brackish water areas in the state to cultivate shrimps and fish like Seabass, Cobia, Milk Fish, Mullet, etc through open pond cage culture. • 50% subsidy is given for a unit cost of Rs.1 lakh per hectare for encouraging prawn and fish farming in inland and backwater resources available in the State.
Agri Business and Food Processing Policy ²¹ , 2015	<ul style="list-style-type: none"> • “Sea Food Park” under PPP mode to encourage “Fish-‘O’-preneurs” with the backup of expertise from research institutes like CFTRI, Mysore, College of Fisheries, Mangaluru and CIFT, Kochi. • Sea Food Park will have facilities like well-developed plots with electricity, water, drainage, telecommunication facility for establishing pre-processing units, processing units of international standards, ice plant & cold storages, frozen storage, value added fish product processing units, packaging units.

Industrial Policy 2014-19
<p>Goal</p> <ul style="list-style-type: none"> • To build a prosperous Karnataka through inclusive, sustainable and balanced industrial development thereby creating large employment opportunities. • To make Karnataka as preferred destination for industrial investment with special focus on manufacturing sector. • To create conducive environment for optimal utilization of natural resources for sustainable industrial development

Features

- Target of 40,000 acres for a land bank for industrial purposes over 5 years, the policy sought deregulation of land laws at the state level.
- Further powers to KIADB within Industrial areas and industrial townships amendments in KIADB Act.
- Private industrial areas of areas over 100 acres where the entire ownership of land is by the private entity.
- Removed restrictions on land conversion, exempting Industries from Karnataka Land Reforms Act, 1961 through Amendment^{22, 23}.
- Formally adopted the JICA funded megaprojects like Chennai-Bangalore Industrial Corridor as well as the Mumbai-Bangalore Industrial Corridor, and proposed several State Level Industrial Clusters.
- Single window clearance mechanism for industries in order to streamline the process, and established Karnataka Udyoga Mitra (KUM) officers to enable companies to achieve clearance.

Karnataka Minor Ports Development Policy of 2014**Goals**

- To provide port facilities and sufficient infrastructure by both Government and Private partners to promote export oriented industries and port based industries in the coastal districts of Karnataka and its hinterland
- To create facilities to handle 5 - 10% of India's total cargo in Karnataka Maritime waters in the days to come.
- To promote tourism by providing facilities for leisure and water sports activities along the coast line;

Features

- Expand existing minor fishing ports into commercial ports handling diverse cargo, as well as captive ports
- the establishment of Karnataka Maritime Board, which included inland water transport for the overall governance of minor ports
- PPP through Build, Own, Operate and Transfer (BOOT) model as well as Build, Own, Operate, Share, Transfer (BOOST) model specifically for captive ports.
- Land acquisition even for private ports to be done by the government. It fixes a cap of 11% as the maximum state government investment in all joint venture port projects.

Tourism Policy of Karnataka 2015-20**Goal**

- Accelerate and facilitate private investments; and encourage entrepreneurship in the tourism sector.
- Motivate and enthuse different segments of the society to contribute towards development of the sector.

Features

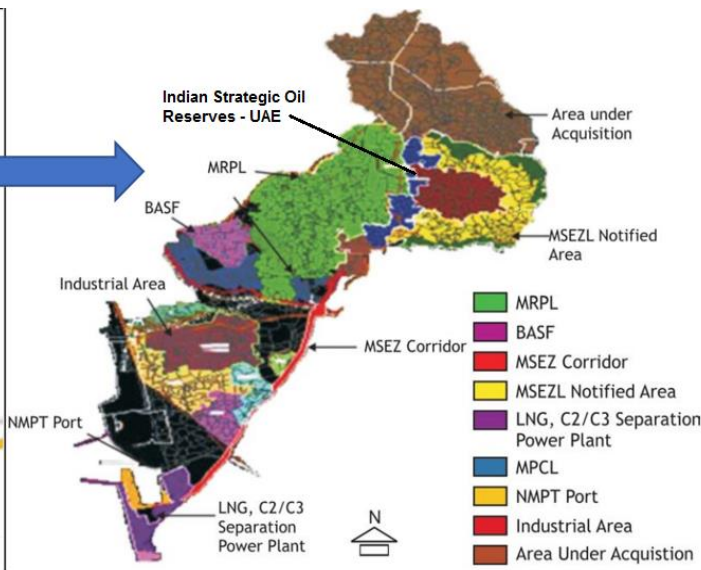
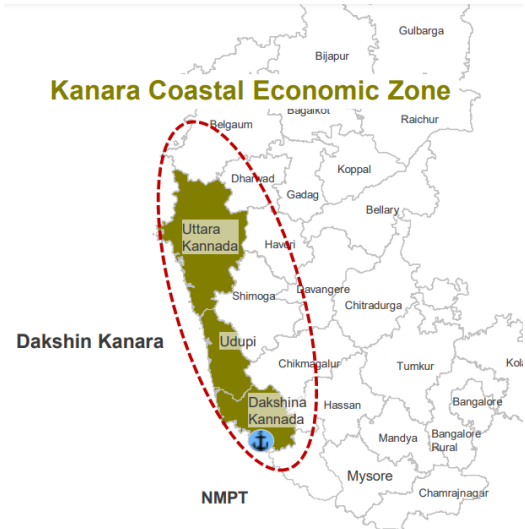
- Thrust on encouraging mega tourism projects worth 100 crores and above
- Setting up a Tourism Infrastructure Company for development of tourism infrastructure and support facilities through dedicated SPVs, PPP frameworks, Joint Ventures, and other appropriate structures.
- Enacted Karnataka Tourism Trade (Facilitation and Regulation) Act 2015 for enabling investments in tourism, ensuring safety & security of tourists and strengthening accountability at various tiers of government.
- Encouraging corporate groups to invest in tourism projects related to community involvement and rural tourism through their Corporate Social Responsibility (CSR) initiatives.
- Coastal Tourism focussing on Mangalore, Udupi, Gokarna, Karwar, Kundapura and Muradeshwara.
- Cruises of international standards to be promoted in Mangaluru and Karwar

Port-led Development Initiatives under BE

India's flagship programme focussing on port-led development, **Sagarmala** has projects worth Rs.21,357 crore in the State of Karnataka, as of July 31st 2019. Port modernisation projects worth Rs.4,791 are focussed on expansion works on the New Mangalore Port (NMPT), Old Mangalore port as well as Karwar port. Port connectivity projects worth Rs.8,634 crore focussing on rail and road connectivity of Mangalore, Honnavara, Belekari, Karwar ports including new highways crisscrossing the fragile **Western Ghats**, along the existing NH 66 Mumbai highway.

In addition to this, 6 rivers in coastal Karnataka are now under **National Waterways Authority of India** for the development of Inland waterways for cargo transport and tourism. These are Gurupura, Kali, Nethravathi, Gangoli, Sharavathi and Udayavara rivers²⁴.

Under the **Port-led Industrialisation Pillar of Sagarmala**, the **Petrochemical Cluster** in Mangalore, as well as the Dakshin Kannada **Coastal Economic Zone** with a combined investment of Rs.7,520 crore, are being operationalised.



The Mangalore Petrochemical Cluster is tied to the expansion of NMPT's LNG Terminals which not only houses several refineries such as MRPL (ONGC) and chemical factories like BASF, but also houses the India's Strategic Oil Reserves Storages. There are also Gas pipelines being laid from Kochi to Mangalore and further to Bangalore, thus making Mangalore a petroleum and petrochemical hub for this part of the country.

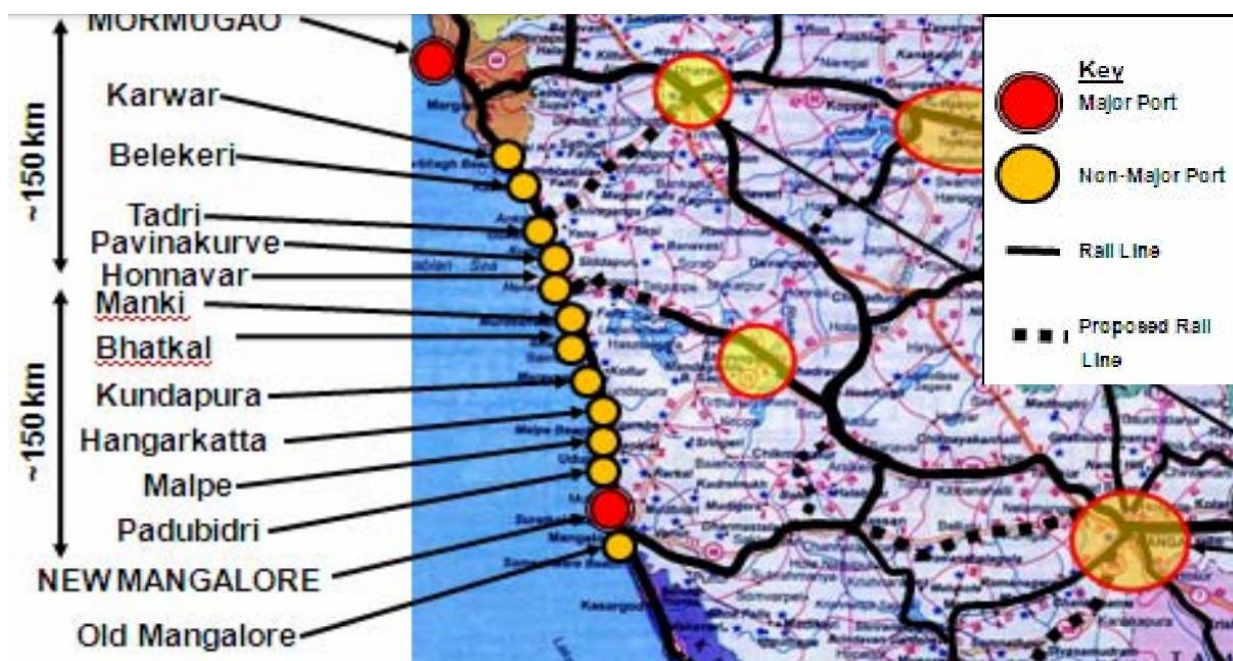
Karnataka revised their **Industrial Policy in 2014** and introduced Karnataka Industrial Area Development Board (KIADB) as the nodal agency with administrative powers over land in industrial areas. In addition, the Federation of Karnataka Chambers of Commerce has demanded an additional 1000 acres be added to the land bank in coastal districts alone²⁵. Under the Central SEZ Act, 2005, Coastal Karnataka has 5 SEZs and several State designated Industrial areas as shown below²⁶:

S.No	District	SEZs	Acreage	Non-SEZ Industrial Areas	Acreage	Total
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1.	Dakshin Kannada	4	2040	5	1739	2779
2.	Udupi	1	635	2	155	790
3.	Uttara Kannada	-	-	9	1607	1607
Total						5176

In 2015, the state government also upgraded 56 gram panchayats around the State to town panchayats and even Municipal councils²⁷, including in the coastal districts like Someshwara in DK district and Kaup in Udupi district amongst others. These upgradations also need to be seen in the light of less powers over land for the inhabiting communities.

The **Karnataka Minor Ports Development Policy of 2014** focusses on 12 minor ports in the state, and proposes a number of other private and captive ports. The Ports and Inland Water Transport Department was the nodal agency to co-ordinate and implement the port development policy until **Karnataka Maritime Board** was established in 2018.



The private and captive ports proposed are in addition to the minor ports already in the state. A common feature is that apart from New Mangalore Port, a bulk of the other port expansions and new port construction projects are promoted specifically for the mining industry. This linkage between the mining of sand, iron ore and other minerals along the Western Ghats as well as the districts further inland and the port construction was existing even in the 1970s when Mangalore port served the needs of the Kudremukh Iron ore company to export the iron ore. We have already seen that infrastructural, industrial and military projects have been promoted from 1970s onwards.

It shows that one of the destructive activities like mining in the forests and inland areas is dependent on another destructive activity on the coasts. The latest state government policy also promotes private captive ports, which are aimed at enriching the same port-mining nexus. It affirms the argument that the present policies, projects and development initiatives centred on the coasts and seas in the name of Blue Economy are strategies for expansion of the existing exploitation of natural resources.

Moreover, Karnataka coasts are subjected to littoral drifts plying in both directions – northwards during the SW monsoon, and southwards during NE monsoon. Thus, these coasts have very high sediment movement along the

coasts, which are maintained in an equilibrium (Naik and Kunte, 2016)²⁸. The presence of numerous estuaries and rivers draining into the sea also means vast volumes of sediments drained into the sea as inputs. Being such a dynamic coast, any infrastructural works may easily upset the delicate balance causing extensive shoreline changes – both erosion on the northern side and accretion on the southern side.

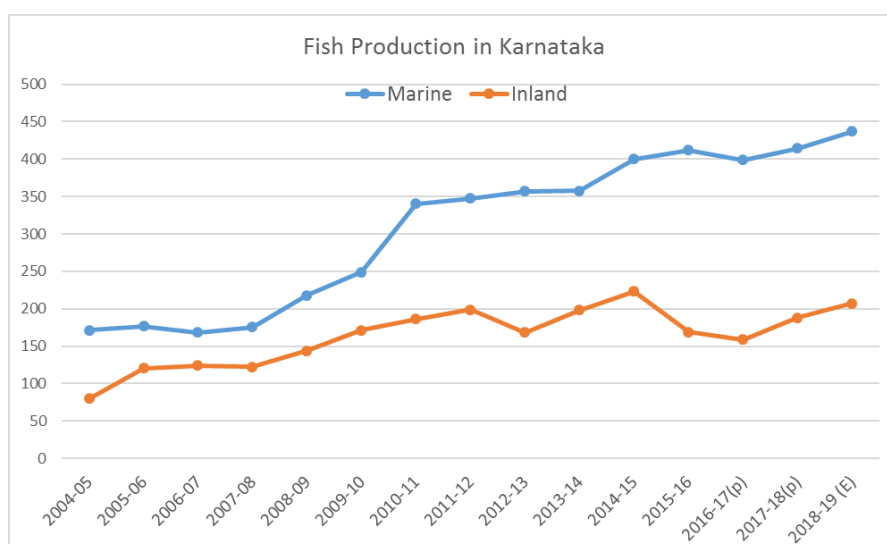
We have been witnessing the marginalisation of small-scale fishers. The various ecological vulnerabilities may not only lead to drastic loss in biodiversity and fish stock, but also loss of coastal land due to land grabbing by industrial and tourism sectors and due to erosion, leading to major displacement and loss of livelihoods for the fishing communities.

Fisheries

India initiated the **Neel Kranti Mission 2015** onwards, and also released the **National Marine Fisheries Policy 2017** (subsequently superseded by draft **NFP 2020**). The thrust of these policies and schemes are on promoting culture fisheries, deepsea fishing and establishing fisheries management systems, with changes in fisheries regulations.

Implementing the Centre's schemes under PMMSY, the state's **Brackish Water fisheries plan 2019** promotes culture fisheries in all brackish water bodies in coastal districts. However, the yield from Culture fishery is still less than Marine Capture fisheries in Karnataka.

Karnataka is yet to initialise the Centre's Deepsea fishing subsidy scheme, but has issued a number of G.Os in the last few years which gave powers to Coastal Security Police to regulate fisheries, and



brought in several regulations over mesh size, juvenile fishing and ban on LED fishing. However, it must be noted that most of the multi-day mechanised boats of Karnataka fish beyond 12 Nm, and hence, the State's fisheries regulations were neither applicable nor the enforcement of previous regulations (Dakshin, 2012)²⁹. In 2015, the State government also stopped providing subsidised diesel directly, but continued through a refund scheme tied to their bank accounts. In 2019, the State government cited lack of funds and stopped disbursing diesel refunds for several months, while the Niti Aayog recommended slashing fuel subsidy given to fishing boats with engine capacities greater than 130 HP.

Many of these orders were based on policy advisories from CMFRI for several amendments to the Karnataka Marine Fisheries (Regulation) Act, 1986, along the lines of Kerala with the objective of enhancing sustainability³⁰ including optimum fleet size. The Fisheries Department has also requested the government to amend the 1986 Act to regulate marine fisheries with enhanced powers to the department with an aim to curb illegal marine fishing. Some of the amendments included fines of up to Rs.2.5 lakh for violations, and making them cognisable offences by legally devolving powers to the Coastal Security Police to book cases and take actions³¹.

In order to comply with the Blue Economy norms towards "*sustainable fisheries management*" and with the larger agenda of Fisheries Reform by UN Bodies, WTO, World Bank, the State government have opted to cut down the number of boats as well as subsidies. Exclusion of fishers can be seen in the very intent of these moves,

despite the fact that the mechanisation of craft and changes in gear were in fact strongly promoted and subsidised by the very same government and UN bodies.

Coming to post-harvest activities, the **Agri Business and Food Processing Policy, 2015**, proposed modernised fish markets and Sea-Food Parks under the claim that setting up dedicated sea food parks shall enable the fishermen to access modern technology for value addition to their produce leading to remunerative prices for their produce and consumers to obtain world class products processed and manufactured adhering to stringent international norms. Implementing this, Karnataka Fisheries Development Corporation (KFDC) has developed a 500 tonne capacity modern sea food processing plant in Mangalore which is leased out to a private contractor³². A second such seafood processing plant of 750 tonne capacity is under construction in Tadadi³³ for Rs.13.34 crores. In the latest state budget of 2020, it was stated that a modern Coastal Fish Export Plant would be established at an expenditure of Rs.12.50 crore, under the Sagaramala Project of the Central Government in partnership with the State Government. National Fisheries Development Board (NFDB) has sanctioned a total of Rs.6.71 crores for establishment of 20 new fish markets and expansion of 8 existing fish markets from 2012 to 2018³⁴. However, due to modernisation of fish marketing with the emergence of male fish vendors, organized retail shops, super markets, traditional fisherwomen vendors are being marginalized in spite of their excellent marketing skills (Gunakar, 2016)³⁵.

Bangalore is emerging as a hub for several online seafood delivery startups like Licious, FreshToHome and Captain Fresh, which have received multiple rounds of seed funding through Venture Capitalists³⁶. These investments seek to shortcut the existing supply and value chains, and the fisherwomen who are dependent on them for their livelihoods. Instead, with increasing formalisation of the entire fisheries supply and value chain, fisherwomen are losing out on not only their domestic customers, but on their access to earn a livelihood through vending.

Coastal Tourism

The government of India's tourism policy under the **Swadesh Darshan** scheme, a coastal tourism cluster was envisaged by the government of Karnataka. However, this scheme was not fully operationalised resulting in the return of funds to the Centre.³⁷

At state level, the state promulgated its **Tourism Policy in 2015**. This policy itself was based on the recommendations of Karnataka Tourism Vision Group, consisting of sectoral investors³⁸ led by Mohandas Pai. But implementing this Policy was possible with allocation of Rs.100 crores in the 2020 state budget for the Tourism Department. The same budget proposes tourism development at Kali, Sharavathi, Hangarakatte, Gurupura and Nethravathi and islands in collaboration with Inland Waterways Authority of India.

The 2020 budget specifies coastal tourism development at Sasihittalu beach for 7 crores. Some Coastal tourism projects such as the Thannirbhavi coastal golf resort have been in the making for over 20 years. It was promoted during the 2003 Coastal Investment Summit organised by the Karnataka government³⁹, and despite several protests by fishing communities⁴⁰, land was acquired in 2020 and handed over to Tourism department⁴¹. This shows us that coastal land was always seen as prime real estate property, and the once investors have set eyes on some coastal land, it eventually does get acquired, regardless of fishers protests, even if it took 17 years.

Additionally, beaches of Kasarkode, Uttara Kannada district and Pudubidri, Udipi district have been granted the **Blue Flag** beach certification. The irony is that St.Mary's Island and Malpe beach have also been selected by MoEF to apply for the **UNESCO Geo Park** tag⁴².

The Asian Development Bank funded **Sustainable Coastal Protection & Management Investment Program** worth \$142 million (INR 864 crores), is being implemented by the Karnataka Maritime Board. This includes a loan from ADB worth \$106.5 million and the rest of the \$35.5 million borne by the state government. Under this programme, the government has constructed several Coastal Protection Structures both onshore and offshore

in Dakshina Kannada and Udupi districts such as sea walls, groyne and offshore wave breakers, and also “soft” options like coastal vegetation and sand dune rejuvenation. In Udupi district, long coastal stretches along Maravanthe, Udyavara and Kodi Bengre have been chosen for engineering structures for the protection of beaches extended upto Malpe.

However, the project explicitly cites its aim as **protecting the coasts in order to secure and improve coastal tourism prospects** (ADB,2010)⁴³. Thus, it represents another form of land grabbing for beach tourism in the name of coastal protection.

From 1990s onwards, Tourist development has been implemented throughout these coasts, dominated by leisure and guest houses, private retreats, holiday "cottages", leading to several CRZ violations, dispossession of land apart from environmental impacts, and infringing on the culture and livelihoods of the traditional coastal communities (Equations, 2000). The coastal tourism projects now in the BE era will further aggravate their conditions.

Maritime Security

As previously mentioned, Karwar in Uttara Kannada district housed INS Kadamba, India’s largest Naval Base is being expanded under **Project Sea Bird Phase 2** from 2017 onwards with the assistance from the consultant firm **Aecom**, which is the same firm behind Sagarmala’s 2016 masterplans and other global corporates like **Boskalis** for the engineering works⁴⁴. The new and expanded naval complex is expected to support several major warships and submarines and yard crafts including the home port for aircraft carriers.

Karnataka has nine Coastal Police Stations, and as previously mentioned, were handed over jurisdiction to register offences under Karnataka Marine Fishing (Regulation) Act, 1986 in 2013. The state having established Coastal Security Police as a separate wing in 1999, has expanded it and instituted a separate State Marine Police Training Centre at Kodibengre, Udupi district in 2016. Much more recently during the lockdown, Coastal Security Police was reported to have harassed many of the migrant labourers in the fishing sector, while ascertaining the identities of people living on the coastline in the interest of national security. Further, the department has plans to avail itself of the services of retired personnel from the Navy and the Coast Guard, natives of the region, on contract basis for the Coastal Security Police⁴⁵.

This is a clear indication of not only increasing militarisation on the sea and coasts with Naval Base, but intrusion of military personnel into the law and order function of the State police.

The above analysis on BE components reiterate the view that BE is nothing but an extension of the existing neo-liberalisation growth model, that has been active in the Karnataka coast for three decades now, having already resulting in several ecological externalities and exclusion of traditional fishers.

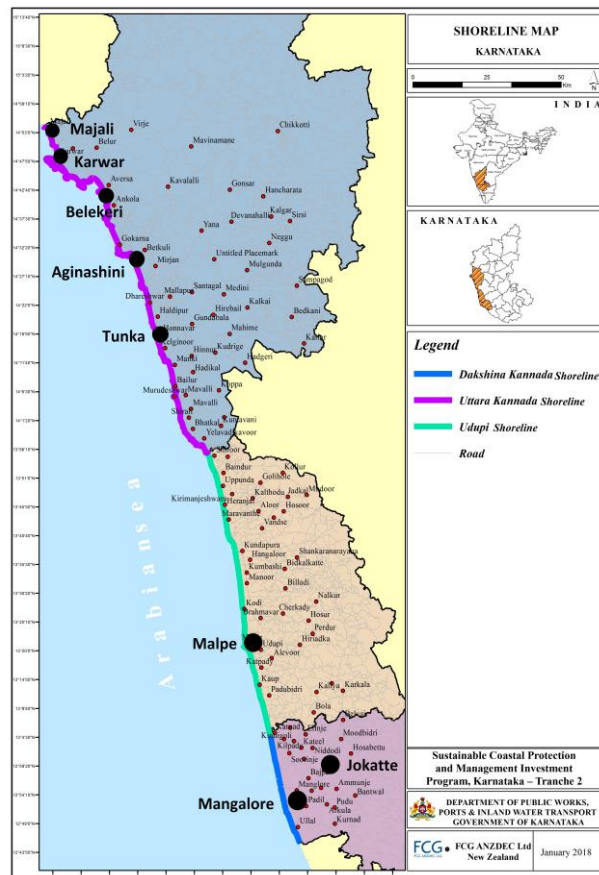
Chapter III

Field Observations

Keeping the above perspectives in mind, the Research Team visited the study sites with the support of Dakshin Foundation as well as Dr. Ramachandra Bhatta, from the Citizens Forum for Mangalore Development in April, 2019.

Field Sites Visited & FGDs Held:

1. FGD with victims of industrial pollution and grabbing due to the Petrochemical Cluster at **Bajpe-Jokatte, Mangalore**.
2. Visit to **Malpe fisheries harbour**, and interactions with Mechanised fishers and with women fishvendors.
3. FGD with fishers in **Tunka**, losing land to a Private port
4. FGD with fishers in **Aghanashini**, resisting the proposed Tadadi Port
5. Visit to **Belekari beach** observing extent of marine pollution
6. FGD with fishers protesting against expansion of **Karwar port**
7. Interaction with fisherwomen in **Majali** and visit to **Karwar fish market**.



Petrochemical cluster, Bajpe-Jokatte, Mangalore



The research team visited the Mangalore SEZ in the Bajpe-Jokatte area north of Mangalore and met with local residents and panchayat leaders. Jokatte was previously known as a peaceful village with lots of green cover, good groundwater as well as fertile paddy fields and plantations.

The team was informed that the Mangalore Refinery and Petrochemicals Limited, a subsidiary of ONGC had established a unit in the nearby location of Mangalpet almost 25 years back, which is considered

as phase 1 of MRPL's projects in the region. Less than 700 persons got jobs, that too from landed families, following an investment of Rs.10,000 crore⁴⁶ for a refinery.

Following this, MRPL in partnership with KIADB and a private financial company, IL&FS, finalised a plan for Phase2 in 2008 under Special Economic Zone and promoted Mangalore Special Economic Zone Pvt Limited. Since the area came under SEZ, the panchayat had no say throughout the process, with only KIADB and the district collector making all the decisions. They came to know that it was a Coke and Sulphur extraction plant through RTI and started opposing the acquisition for required Green Zone of 27 acres. When the production of the plant started in July 2014 and the pollution related problems became clearly apparent for all the residents, the protests got strengthened.

The particulate emission of the carbon was causing respiratory illnesses for many, including 8 deaths due to respiratory illnesses in the recent past. The groundwater levels in their fragile hilly aquifers plummeted. The mixing of industrial effluents seeping into the aquifer has also contaminated the groundwater. They even mentioned instances of effluents being let out on empty grounds nearby, which killed many of the trees. Residents complained almost all houses in Jokatte has dug-wells for domestic purposes, but they are all rendered useless now, with skin diseases very common. The immense noise from the factory was also causing sound pollution. Children and college students complained that it was impossible to study. Many said *“No friends or relatives ever visit us, since we are in Jokatte”*.



Coconut tree with carbon black particles settled on them in Jokatte

By 2014, joint fisher-farmer protests were held against the entire Petrochemical cluster including the Refinery, Mangalore-Bangalore pipeline project passing through these villages, as well as the mega oil bunker built as India's Strategic reserve. The prolonged protests led to a 6-point declaration in January 2017 ordered by the District Administration which was approved by the State minister too⁴⁷. They promised to increase the green belt, with stricter pollution control norms, but none were subsequently adhered to.

This case illustrates the enormous land grabbing promoted under industrialisation, and the health and environmental costs of promoting petrochemical clusters in densely populated coastal regions, as well as the deregulation of land laws, RTI and several environmental regulations with full State support for port-led industrialisation. The lack of adequate rehabilitation or compensation measures also shows us that such development projects not only degrade the environment, but exclude coastal communities from development as well.

Marine Fisheries and Tourism, Malpe

On our visit to Malpe harbour, we were able to observe the huge mechanised purse seine and trawler fleets. It was starkly observable that a large number of women worked as labourers in the loading, unloading operations of fish and ice, as well as during auctions. We learnt that many of them are migrant women labourers from as far as Cuddalore in Tamil Nadu. We learnt that women from Cuddalore spent almost 8 months in Malpe and spend the offseason back home, and get called by agents when the season restarts. Many of the fishworkers working as labour on the mechanised boats were also from fishing communities in Tamil Nadu, Odisha, Andhra Pradesh as well as non-fishing communities from North



Karnataka and UP, Bihar, etc. This gave us an understanding about the enormity of the migrant labour problem in the mechanised sector in Karnataka.



In our interaction with leaders from Malpe Deepsea Trawl Fishermen's Association, we learnt that even though new registrations are not being given for purse seiners, there are still 600 unregistered purse seine boats and 271 LED purse seiners in Malpe, despite the government order banning LED fishing. These boats carry 25 kV generators to power the LED lights, which shine so brightly that they attract fish from over 50 km away.

In terms of boat ownership, the Research Team was told that out of the 22485 boats in Malpe harbour, almost 95% of them are from within the fishing community, although labourers come from many places. We learnt that more than half the boats are multi-day trawlers who fish beyond 30 Nm, and are registered as per the state's laws.

With the coming of National Fisheries Policy 2020, and the National Marine Fisheries (Regulation and Management) Bill, these fishers must reapply for licence to fish in EEZ to the Centre and get their boats registered under the Merchant Shipping Act. Failure to do so would legally make them IUU fishers. Given the sheer number of such boats, the power to legalise them or not now lies entirely with the Central government. It is plain to see that the future of such fishers, labourers and the entire chain of allied activities is entirely at stake.



Interactions with members of the Malpe Fisherwomen Cooperative Society, with a membership of 2480 revealed the extent of fisherwomen participation in local trade. However, they do not receive adequate storage and marketing facilities in and around the Malpe harbour. This cooperative society was formed in 1977 and has won numerous awards at state and national level and cited as a success story. However, members complained that they get fewer fish since big boats sell directly to big traders, who sell to large export markets and to metropolitan markets like Bangalore.

They informed the Research Team that their cooperative society leases land from the port authorities for their members' fish drying yard. But the port authorities have been steadily increasing the annual lease amount and threatening to cancel the lease to the society. With the fisheries harbour also owned by Port authorities, and several plans being made for tourism development at Malpe and nearby St. Mary's Island, the risk of losing their fish drying yard is ever present.



We also visited the Malpe beach very near the Harbour, where tourist infrastructure was being developed. We could see adventure tourist activities like water ski and parasailing activities. We also viewed the St.Mary's island from ashore, which was recently one of India's applicants for UNESCO's GeoPark status. Just opposite the pristine white sandy Malpe beach, we also observed a line of large private resorts within the CRZ zone.

tourist purposes.

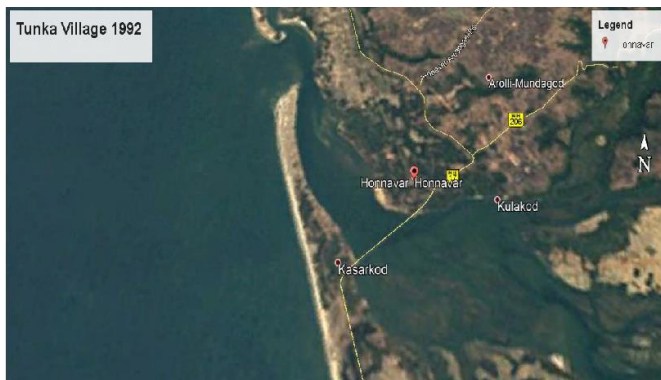
It brought forward the contrast of traditional fisherwomen struggling to secure land for their livelihood activities like fish drying, while at the same time, vast swathes of beach land right in the vicinity being privatised and developed for

Port Construction, Tunka

We visited the village of Tunka, part of Kasarkoda panchayat near Honnavara in Uttara Kannada district. This lies at the meeting point of the Sharavati River and the Arabian Sea. The dry fish business is also very big, with a large number of women involved in drying fish. Tunka has about 300 families with a population of around 1000, with Hindus, Muslims and Christians all involved in fishing activities.



It was shared that the Sharavati River has shifted over 2-3 kms in the last 2 decades and a new coastal slit of land had emerged. As a result of which, the area where the fishermen were living was submerged by the shifting river mouth. The abandoned river bed had formed the new land and as a result of which the fisherman who were residing in the area now submerged in the sea water, were compelled to shift to the new area which was formed. They have started to carry on their livelihood activities in the said area like drying fish. This new piece of land was not present in the older survey maps used by the Revenue Department.



It was informed that these 27 families living on this land, in addition to the dry fish women and traders also paid fees to the Kasarkod Panchayat for using this land space. Unfortunately in 2013, the government of Karnataka recognised this new piece of land in an updated survey map and decided that a commercial port be constructed

on this land⁴⁸. In 2015, it leased the land to a private company to build the port⁴⁹. These 27 families along with all dry fish dependant fishworkers have been declared as illegal encroachers to this land. It was also shared that another captive port for Jindal Steel is planned hardly a few kilometres north along the coast at Pavinkurve. This site brought out the dynamism of the coast due to the fast flowing Western Ghat rivers, and the irony of building ports in such a vulnerable coastline. It also showed us the peculiarity of land rights on such dynamic coasts where change in river course can remove and make new land. The state's denial to recognise the right of displaced fishers to use the new land for their livelihood contrasted with the ready approval and transfer of the same land to Corporates for private port construction.

Port Construction, Tadadi

The team visited the Aganashini river estuary which is a rich biodiversity hotspot with mangroves and unique oysters growing in abundance and interacted with a group of fishers from the estuarine area. It was learnt that almost 9000 traditional fishers including men and women from 35 surrounding villages are involved in fishing wild clam and oyster collection from the estuary. Women dive into the river for over 6 hours a day to collect these bivalves which were seen in all the estuaries of the Sharavati, Kali and other regional rivers, but continue to survive only in the Aganashini river estuary now. Farmers in and around the estuary area also practice traditional coastal shrimp culture along with unique varieties of rice grown in brackish water known as Kagga.



Fishers complained that for the last 10 years, private investors have availed land on lease and started **intensive shrimp culture** in about 60-70 acres of land. Chemical effluents from these farms are damaging the estuary's natural production and the clam/oyster collections have been reducing for last 5-6 years, and is on the verge of extinction. It has also destroyed luxuriant mangrove forest area and native Kagga rice fields. It was also pointed out that **limestone mining from the cliffs** was also reducing flow of nutrients into the estuary for the bivalves to grow.

They narrated to the team that Tadadi, a site on the estuary was originally chosen as a site for a coastal Thermal power plant by NTPC in 2006. Subsequently, due to protests, the project was dropped in 2009, but plans for a mega port at Tadadi were made in 2014. Fishers and farmers fear that a port could totally destroy the entire estuary and all the livelihoods currently being supported. They allege that it is being done entirely to suit the interest of the Sand and limestone mining lobby in the area.



The proposed port is a multipurpose all-weather port with seven berths, six of them for handling and transporting coal, iron and steel. The port is to be constructed inside the estuary, on 1400 acres acquired by the state government more than 3 decades back⁵⁰. The Rs 3,813-crore project of the Karnataka State

Industrial & Infrastructure Development Corporation Ltd was given the go-ahead by the central Ministry of Environment, Forests and Climate Change's Expert Appraisal Committee (EAC) at a meeting on 26-28 December 2016.

The research team was also taken in by the natural beauty and fertility of the estuarine ecosystem to produce so many oysters and bivalves, including some 4 species unique to this region. The team learnt that estuaries throughout Uttara Kannada district had thriving oysters, but Aghanashini estuary is among the few that continues to thrive despite the existing levels of pollution by the mining and aquaculture activities. A port on the estuary however would no doubt decimate among the few remaining pristine spots in this region, and along with the subsistence livelihood for the fishers and farmers on this region would be destroyed forever.

Belekari Port

The Research Team visited Belekari but could not enter the port premises as it was sealed by the Coastal Police station nearby. It is proposed to be expanded under Sagarmala.

The port was at the centre of the infamous Karnataka Mining scam, where illegally mined iron ore from Bellary and other districts was getting exported through this port, which was operated by Adani Enterprises. The scam relates to 3.5 million tonnes of Iron ore illegally exported from this port despite being seized for forest department irregularities and the Karnataka High Court refusing permit to export. The iron ore was from the infamous Obulapuram Mines of Bellary, which were themselves deemed illegal due to several violations. The Lokayukta report details how Belekari port was the anchor point of the illegal trade. Following the public outcry over the scam, the port operations was closed from July 2010 onwards.



The Research Team viewed the site of the port from outside but could visit the Belekari beach nearby. Huge deposits of oil spills and black particles littered and coagulated all over the beach was seen, indicating the extend of marine pollution due to the commercial shipping traffic in this region.

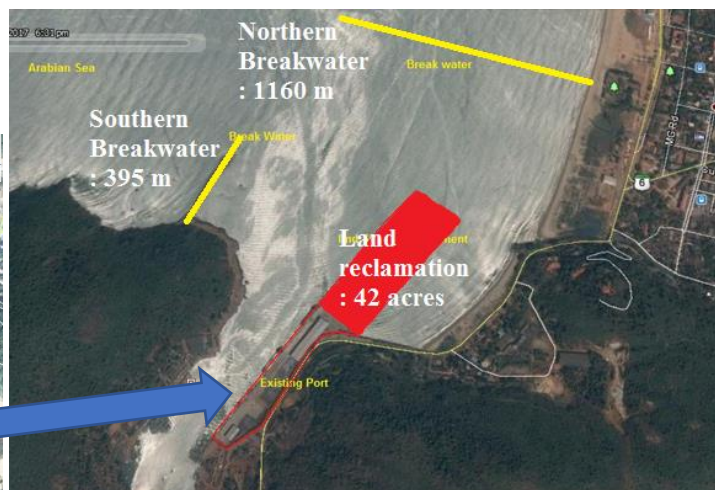
The travel throughout this route from Aghanashini to Belekari to Karwar was through the highways entirely carved through the Western Ghats. All along the team observed road expansion activities along the same highway and also parallel highways being constructed. Interactions with local communities revealed that those new highways are exclusively for port based traffic and not for community usage. All this construction activity involved further excavation of the ghats. Large pieces of rocks often were found on the road as they could have felt from the precarious ghats above.



Port Expansion, Karwar

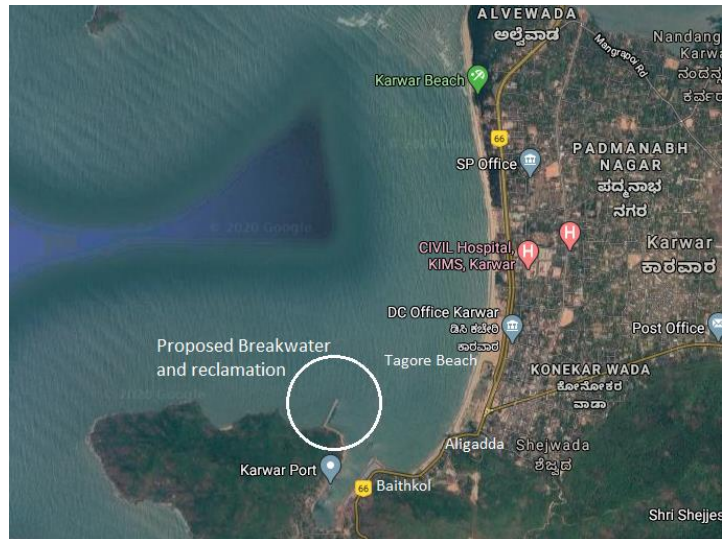
The Research Team visited the Karwar fishing harbour and had an interaction with representatives from the Karwar Mechanised Boats Association. The team learnt that the Karwar fishing harbour was owned by the New Mangalore Port Trust (Central government), and only some berths were leased by the fisheries department, with negligible representation of fishers in management of the harbour.

As part of Sagarmala, the state government has planned for expansion of the Karwar port with 6 new berths planned along with a 1.5 km breakwater jutting into the sea.



They unanimously opposed the port plans. Karwar is a natural harbour within a bay ecosystem well protected naturally with hills on both sides with calm, deep waters. These make Karwar the safest harbour on the western coast for all fishing boats during any storm or cyclone. With the planned port expansion, the fishers across the west coast would lose this safe haven.

Further, the land reclamation would lead to dislocation for all the fishworkers who live in and around the existing harbour. A lot of the fishworkers here were from fishing villages displaced due to Project Seabird in late 80s – showing the threat of **double displacement**. The breakwater would cause further erosion all along the Karwar coast impacting traditional fishing families who practice fishing in Baithkoli, Tagore Beach and Aligadda beach in Karwar. Already being a crowded fishing harbour, promoting commercial shipping would not only lead to more congestion, risk of accidents and frequent suspension of fishing activity but will inevitably lead to destruction of ecology, buffer zones and denial of access to the fishers from the navigation channels.



Fishers have filed PILs against the port expansion project under Sagarmala, and in January 2020, the High Court of Karnataka not only directed the State government to stop all construction activities related to the development of commercial Karwar port, but also asked it to restore the beach, which was levelled to reclaim the proposed area for constructing a breakwater, to its original condition. While work on the breakwater is temporarily halted, the state government has proceeded with Karwar Port Stage 2 construction including an office building for maritime board, a godown, cement silo, tank terminals, hotels and shops and other utilities⁵¹.

Small scale fishers and fisherwomen, Majali and Karwar market

The research team visited the fishing village of Majali on the Karnataka-Goa border. These were villages entirely consisting of beach-based traditional fisheries, with many non-motorised along with a few motorised boats.

The Research Team learnt that most of the fishers inhabiting Majali and Devbag were from 5 fishing villages which were displaced in the 1980s due to the construction of Naval Base under the Project Seabird, without receiving compensation or rehabilitation. While many of the displaced families were able to be accommodated in coastal villages like Majali, Devbag and continue small-scale fishing, a number of fishing families left for Karwar town becoming daily wage labour in the mechanised sector and some left for other villages no longer involved with fisheries becoming informal labourers.



Traditional beach-hauling technique for boats

Due to the presence of the Kali river and the Karwar Bay, the near shore waters were quite fertile and SSF used to get adequate catch. But the present expansion of the Seabird Phase II project began in 2017 and threatens all the fishers of this region yet again, and especially the small scale fishers. The frequent engineering works included underwater drilling and blasting of rocks which destroy the entire nearshore ecosystem. Already, several of their fishing grounds including many islands are completely off limits for the fishers despite assurances to provide



passes for fishing in the Navy Base limits. Now, the fishermen are apprehensive that similar thing might happen with the simultaneous Project Sea Bird Phase 2, and the expansion of Karwar Port under Sagarmala.

The team observed that traditional systems were still adhered where the men went for fishing and the catch will be sold by their women at either the village market or the main Karwar fish market. Thus, the actual financial operations of the household are largely with the women of the household.

At the Karwar fish market, the team learnt that their women's society previously had the contract to run the entire market in the city municipality. But with new "modern fish market" constructed and increasing competition with larger traders, the municipality demanded exorbitant amounts of Rs.8 lakhs per year as lease amount to renew the market contract. So the markets have gone into the control of private contractors, who now fleece the women fish vendors for daily commissions. This highlights the exploitation of fisherwomen, where their livelihood rights were snatched away, as the control of essential spaces is handed over to commercial operators in the name of Modernisation of fish markets.



Chapter IV

Analysis

A critical analysis of national and state level policies, legislations, schemes and budgets and other available literature revealed a steady promotion of infrastructure and industrial projects for commercial interests on the coast. Corroborating with the field observations, several vital issues stand out. The observations from the field also highlighted a number of socio-economic, ecological and political implications for the coastal communities.

Ecological Implications

- **Shoreline Changes**

As discussed in the introduction, Karnataka coast with vast number of hard rock cliffs, bays and rivers with sediments flowing into them. We observed in Tunka village, the Sharavati river estuary has changed course and swallowed up tracts of coastal land on the north bank, and new land has been formed on the south bank. Shoreline analysis of the coast from 1990-2016 by the National Centre for Coastal Research shows that 30% of

the coast is accreting and 22% is eroding (NCCR, 2018). The most severely affected areas as Ullal, Bengre, Tannirbavi to the immediate south of New Mangalore Port, and Honnavar, Bhatkal, Bhavikeri in Uttara Kannada district, where all the minor port based projects have been discussed in our study.

Karwar, already facing the long term impacts of land reclamation due to the Project Sea Bird Phase 1 has lost some 50m of coastline at the Karwar Beach due to erosion. The cumulative impact of expansion of the Naval Base as well as the Karwar port would not only lead to further erosion, but potentially sink parts of the city.

Building massive infrastructure like ports in such a location would lead to massive erosion along the entire coast, since the rich Western Ghat rivers are a huge source of silt and sediments that are later deposited along the several beaches on Arabian Sea coast. In fact, this is the reason for the finer sand found on west coast beaches. Thus, by disrupting the interplay between the river and coast, the very beaches that are sold for tourist projects will be in long term deterioration.

Moreover, even in the name of mitigating erosion, the state government is building groynes, seawalls and plans further to construct artificial reefs, geo-tubes and other technical structures under ADB support. But the coasts of Karnataka are more vulnerable to the phenomenon of cascading erosion since the entire state's 300 kms coast is within 3 primary sediment cells⁵². Thus, blocking movement of sand through these structures may only further shift the erosion northwards along the coast.

Thus, we see the interlinkages between the rivers, estuaries along with the coast in forming the shoreline. With Inland Waterways being developed, and mining industries in the hinterlands along with major infrastructure projects on coast, the implications for further shoreline changes are grave, which reiterates the interlinkages between riverine damages and coastal destruction.

- **Biodiversity loss**

Despite a very rich continental shelf being traditionally called "Mackerel coast" filled with several coral rich islands, fishers have expressed a fish famine on such fertile coasts – due to several anthropogenic factors. The increased shipping traffic increases the risk of marine pollution due to oil spills, and shipping effluents, like we had observed first hand in Belekeri.

With increasing industrial activity, that too with highly polluting petrochemical industries, and the disregard for emission norms and effluent treatment (as observed in Bajpe-Jokatte), there are grave implications for further marine pollution along the coastal waters. With increasing port activity, there is increasing dredging which destroys the seabed ecosystems of the near shore waters as well as destructive technology like underwater rock blasting used for the expansion of the Naval Base. Not only capital dredging, but the waters around the New Mangalore Port has seen annual maintenance dredging varying from 1.67 million cubic meters to 4.28 million cubic meters annually during 2006-16 (Naik and Kunte, 2016). Given the number of ports being expanded along the rivers and estuaries, there are grave implications to large scale destruction to the crucial fish breeding sites in the near shore waters.

The impacts of industrial aquaculture as well as limestone mining were clearly visible in the Aganashini estuary when local fishers revealed that wild bivalve production has drastically reduced in the last decade, yet again reinforcing the integrity of inland and marine ecosystems. Several beaches have already been converted into tourist spots, and are promoting Island tourism.

With this level of pollution and habitat loss for fish, it is obvious that fishers across our field sites from Malpe to Majali all reported drop in fish catch. Fishers reporting that species like Threadfin bream, Squids, Shell fish, Cuttle fish, certain crab species, Chinese pomfrets, too no longer found in inshore waters (Dakshin, 2012). With the expansion of economic activities mentioned under BE, the future of marine ecosystems including corals and seagrasses remains in question, as the ecological integrity of the river-estuary-coastal seas will be damaged.

- **Natural Disasters**

The scale of road infrastructure projects under Port Connectivity pillar of Sagarmala, along the Western Ghats has made the region more susceptible to disasters like landslides and flooding. This came true hardly 3 months after our field visit. The August- September 2019 monsoons in Uttara Kannada district led to massive flooding and triggered landslides along NH 66⁵³. Several villages in Ankola and Karwar taluks of Uttara Kannada were cut off. The flood also brought washed across fields from iron ore storages, and several farms were inundated with iron and manganese ore⁵⁴ from hinterland mines.

Karwar is the safest natural harbour for fishing boats on the western coast during storms. The increasing number of tropical storms in the Indian Ocean and Arabian Sea in the last few years and immense loss to fishing communities in Cyclones like Okhi and Gaja have highlighted the need for preserving and enhancing such safe natural harbours. The damage is not only at sea, but even at harbours, lack of adequate space for parking boats leads to damages for boats. The loss of safe harbours to fishers due to Sagarmala will make the fishery sector even more vulnerable to disasters.

Socio-Economic Impacts

- **Loss of Land Rights**

<One line removed>The Tunka field visit showed that despite using the land for over a decade after losing their original lands, and paying taxes to the local panchayat, they have still lost their community land rights. The state government did not even recognise the existence of the coastal slit since it wasn't on the survey maps. However, the moment private port was proposed on it, the government swung into action and allotted it to a private firm. The powers given to KIADB and other parastatal bodies to acquire land for industrial and infrastructure purposes have increased after the new Industrial Policy 2014 was approved, especially with Land laws being amended.

Across the field visit areas, we also observed that hardly very few coastal villages have pattas. Even during the 80s during land acquisition for Project Seabird in Karwar, the individuals who got inadequate compensation and fought legally for higher compensation in the Supreme Court were mostly farmers with title deeds. The fishers from the 5 displaced coastal villages merely got displaced with no compensation to speak of. The various port, industrial, military and coastal tourism projects are all eyeing the coastal land. The adventure sports and resorts we observed in Malpe were but a glimpse into how entire beaches may be taken over for tourist projects.

The consequences of lack of recognition of coastal land rights for fishing communities become direr as the number of such infra projects on the coast keep increasing.

- **Loss of Livelihood**

Traditional coastal livelihoods are dependent on the marine and coastal resource, beach based fish landings and subsequent supply chains. There is a direct link between the ecological degradation, loss of rights to the loss of livelihoods of the resource dependent communities.

The various ecological impacts highlighted also have economic implications for coastal communities. For instance, according to a 2008 study, Bivalve production in the entire Aganashini estuary was estimated to be 22,006 ton/year generating a net annual income of Rs 5.78 crore from bivalve collection. The Aganashini fishing village alone earns Rs. 3.3 crore per year from bivalve collection. (Bhoominathan et al., 2008). These numbers show us the economic costs of habitat and ecological destruction, and will entirely fall upon these resource dependent communities.

We also observed how fisherwomen are involved in the fisheries post-landing activities as self-employed women. But fisherwomen are losing control of markets, with entry of commercial operators.

The agribusiness policies of the state government focuses on mega seafood parks under PPP model, and there is increasing privatisation of the entire supply and value chain. The shift towards export oriented capture fisheries also changes the fish catch towards export oriented species and not fish as local food. This may further reduce the presence of fisherwomen vendors in the supply chain, as was articulated by women in Malpe.

Fisher women are shift from self-employed category to wage labour category as we saw in Malpe harbour. This casualization of labour implies Fisheries is increasingly being converted from a way of life and livelihood to a mere occupation or an income activity.

- **Migration and Displacement**

Fishers in Karwar are under threat of “**double displacement**” due to the Sagarmala projects at Karwar port, having been displaced by Project Sea Bird- Phase 1. The Port and Naval Base expansions threaten not only land in the vicinity of Karwar, but also massive erosion to beaches and fishing villages along the northern side of Karwar⁵⁵. It has taken 20 years for these fishers who lost everything, to slowly rebuild their lives, which is now under threat again.

As observed, women from as far as Cuddalore in Tamil Nadu are coming to Malpe shows the extent of distress migration already among coastal communities. It also shows that due to their specialised skillsets, women from fishing communities are being used as labour in supply and value chains serving harbour based mechanised fisheries.

With central government policies pushing for further mechanisation and intensification through deepsea fishing policies, the spectre of migration among fishers looms even larger than present. The risks involved in migration make labourers even more vulnerable, especially so in case of disasters. The plight of the migrant fishworkers was explicitly visibilised during the National Lockdown due to the Covid19 pandemic.

Political

As observed in Bajpe-Jokatte, there is a shrinking space for local governments in any decision making or even information obtaining roles, due to increasing powers to parastatal bodies like KIADB, Maritime Board and increasing Centralisation of powers with Sagarmala. These measures marginalise the voice of local communities, and their rights to resources is eroded.

Within fisheries too, several important fishing harbours in Karnataka such as Malpe, Honnavara are within the jurisdiction of the new Karnataka Maritime Board. The importance of Karwar as a safe harbour for all fishing boats in the region is undeniable, and yet, Port Trust authorities are looking to expand its commercial cargo capacity which will shrink the space available for fishing boats. Despite being lease holders, fisherwomen societies are losing their fish drying yard in Malpe harbour, which is under the control of Ports department. With harbour and port governance undergoing even further changes, ports looking to improve “economic returns” from their port land may decide to lease their lands to private and commercial entities instead of communities who are involved in non-commercial, livelihood based activities.

All these developments are occurring within the context of larger militarisation of the coasts as seen with the increasing transfer of powers to Coastal Security Police, expansion to Naval Base, and increasing restrictions and surveillance on fishers.

Chapter V – Conclusions and Recommendations

Conclusion

The development activities in fisheries sector and the entire coastal districts in sectors including Tourism, Maritime Security and Port-led growth demonstrate that adoption of BE is nothing but an extension and expansion of the neoliberal policies on the coastal and marine commons. The observations confirm that BE projects are leading to huge ecological externalities, as well as gradual exclusion of fishing communities, and that all the investments along the coast and marine spaces are indeed secured by increasing militarisation and maritime surveillance. This **resource grab** is enabled by international financial agencies and corporations for the further capital accumulation of national global corporates. This reinforces the notion that Maritime Security and BE are indeed two sides of the same coin.

Recommendations

1. The experiences of fishers in Karnataka strongly reinforces the need for immediate recognition of the collective rights of fishing communities over coastal and marine commons. It is high time there is a national legislation that protects the access rights and customary governance of coastal communities over coastal and marine resources.
2. There has to be a cumulative impact assessment of the various projects that are promoted within the same location as well as interlinked ecosystems. Environmental regulations have to take into account the cascading impacts like erosion as well impacts of hinterland projects on the vulnerable coastal ecosystems
3. There has to be holistic reparations for all affected communities due to major infrastructural projects, which have to necessarily take into account not only the loss of livelihood and assets, but the degradation of environment essential for resource dependent communities as well as shocks to their way of life due to repeated displacements
4. The central and state government's agenda for fisheries reform through the National Fisheries Policy 2020 and the proposed amendments to the Karnataka Marine Fisheries (Regulations) Act must be halted and rethought. There cannot be restrictions on usage of crafts, but only regulations on usage of destructive gears. The stand of the National Fishworker's Forum on 'One Family – One Boat' must also be emphasised to secure the livelihood rights of fishers, and prevent harassment from fisheries department and exploitation from non-fishing capitalist boat owners.
5. Scrapping of agribusiness policies which are promoting privatisation of supply and value chain, and need for securing rights for fisherwomen over fish markets and over the fish catch at harbours and fish landing centres. There has to be greater regulation of newer forms of corporate capture of these post-landing chains such as online retail.

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