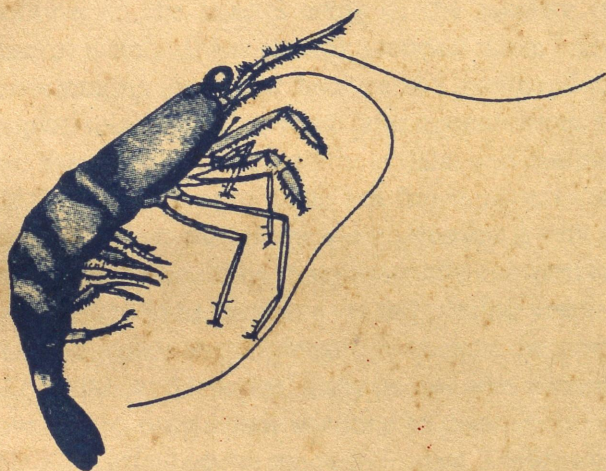


PRAWN CULTURE: A DEMON ON THE COAST

:- Hazard to the Coastal People and Environment :-



BANKABEHARYDAS
President, Orissa Krushak Mahasangh

**ENVIRONMENTAL DISASTER AND DEPRIVATION
OF COASTAL PEOPLE DUE TO PROLIFERATION
OF PRAWN CULTURE ON COAST OF ORISSA,
ANDHRA PRADESH AND TAMILNADU**

— *Banka Bihary Das*
President
Orissa Krushak Mahasangh

Prawn culture on the coastal areas of the country is spreading indiscriminately. It has already sounded alarm bells because of its devastating impact on the lives and livelihood of coastal people, particularly fishermen and poor agriculturists. It has also caused irreparable damage to the coastal and marine environment. If Government of India do not frame a clear-cut policy regarding coastal prawn culture and implement it with a strong hand to compel the maritime states to strictly conform to it, the situation is bound to be disastrous in the coming years.

For the last one decade or so, when prawn became the most prize commodity in the world market, many people who wanted to grow rich over night, turned their attention to prawn culture on the coast of India, particularly on the eastern coast. Tamilnadu and Andhra Pradesh led the path and now Orissa has joined the race.

The Government of India also encouraged the coastal prawn culture as a easy source of exportable high-valued commodity and World Bank and other financial institutions have come in a big way to assist such activities like agricultural production. Such aquaculture practices are being given all types of incentives including income tax and sales tax benefits. It has been given the status of an industry also for attracting investment.

This mad rush for big money has brought great disaster to the people living in coastal regions including millions of fishermen and agriculturists. The entire coastal and marine environment is now under threat of destruction. Signs of discontent have already surfaced in the coastal belt and time is coming when they will have to go on a war path to prevent the collapse of their economy.

Thailand, Phillipines, Taiwan and all other South East Asian countries ran after big money by pursuing indiscriminate prawn culture. All of them are now repenting after destroying their rich coastal mangrove forest and also after destroying the economy of the indigenous poor people, particularly fisherfolk and farmers. Intensive prawn culture has been practically abandoned in those countries and semi-intensive prawn culture is on its way out. The prawn feed companies and experts operating in those countries have turned their Nelson's eyes to India and we have fallen a victim to it. It was too late for those countries to realise the disaster but we did not try to learn any lesson from them. Within a decade of its introduction, the blue revolution is turning grey in our country.

It is officially estimated that 1.4 million hectares of brackish water area is available in India along the coast, out of which 1.2 million hectares appear to be potential for prawn farming. At present 82,500 hectares are utilised in seven states, namely West Bengal, Orissa, Andhra Pradesh, Tamilnadu, Kerala, Karnatak and Goa. When six percent of total potential area, utilised has already brought disaster to the coastal environment and to the livelihood of common men living on the coast, it is high time that the Central Government should intervene effectively and frame its policy and a coastal development management plan to mitigate the impending disaster.

All the studies undertaken by Andhra University and Central Institute of Brackish Water Aquaculture and other expert bodies about coastal prawn culture in their states, have pointed out the adverse environmental impact in nine categories. They are (1) effluent discharge (2) Hypernutrification and eutrathpication (3) chemical residues, (4) Disease outbreaks (5) Public health hazards (6) Environmental effect on exotic species (7) Socio-cultural and economic impacts (8) Impact on birds and aquatic animals (9) Conflict with other uses.

The adverse consequences in all the above mentioned aspects is so devastating that any Government that is accountable to the people, will put a stop to such vandalism perpetrated on man and nature only to earn big money with impunity. When entrepreneurs and corporate groups rush to remote coastal villages of Andhra Pradesh, Tamilnadu and Orissa to start aqua farms and create serious divisions amongst harmonious village communities by all means available on earth including engagement of mafias, the political boss in state or national headquarters have not yet woke up to such a calamitous situation.

The tragic and dark picture of village Kurru-Pattapupalam of Nellore district in Andhra Pradesh, where five hundred families do not get drinking water for the last two years because of heavy drawal of fresh water by prawn companies and consequent intrusion of saline water into wells and ponds, is going to be repeated in all coastal areas, where prawn culture has been introduced. After supplying drinking water by tankers from a distance of 20 K.M. to their village for the last two years, the Andhra Pradesh Government has decided to remove all these five hundred families from their hearth and home for rehabilitation in other areas.

The same tragic picture has been evident in Nagai Quid-e-Milleth district of Tamilnadu where fifty percent of

Tamilnadu's prawn farms are located. People are up in arms and social tension has reached its peak.

Thanjavor and Nagai Quaid-e-Milleth districts have been traditionally the granary of Tamilnadu. They have been highly developed because of agricultural growth. But the people of those districts are seething with discontent and unrest has spread due to indiscriminate prawn farming. Besides agriculturists, all the Scheduled Caste people who were mostly landless labour, the entire fishing community in the 62 villages of Sirkali Taluka's coastal area and the backward communities and more so the women, are now facing worst of their lives due to this ever spreading prawn culture Sarvoday Gram Swaraj Movement is carrying on a struggle for the last two years and facing the wrath of goondas of those prawn culturists. Soil, water and air have been polluted and epidemic diseases like cholera, diarrhoea, jaundice and skin diseases have become common. Anguish and wrath of women who have lost employment in agricultural fields are unimaginable.

All laws are being violated and creeks, sanctuaries and mangrove forest are being destroyed. The entire coastal ecosystem is being devastated. In Nellore district of Andhra Pradesh prawn farms pose a direct threat to the rich mangrove forest that has acted as a natural barrier against cyclone and tidal bores which lash Andhra Pradesh coast often and also against heavy erosion of the shore line. Mangrove forest has been the best spawning ground not only for prawns, but for other fishery resources. But at present greed is wiping out everything that has been sustaining the coast of Andhra Pradesh and Tamilnadu. Whatever has been built during millions of years, has been in the process of speedy destruction in course of a decade of prawn culture.

Much of the mangrove forest in Andhra Pradesh located in Krishna, East Godavari and West Godavari districts have been cleared for shrimp farm construction. Mangrove forest were also destroyed due to blocking of tidal access by farm dykes and access roads. Major destruction occurred at Coringa mangrove forest reserve, Koduru, Nagayetanka, Humsaladive Estuary, Kothapalem and Korapateh. This has resulted in coastal soil erosion, lack of protection from cyclone and tidal waves, loss of feeding grounds for marine forms, and loss of biological diversity of population associated with mangrove ecosystem.

Pulicut Bird Sanctuary of Andhra Pradesh has not been spared. In violation of Wild Life Protection Act, it has been encroached even by prawn companies and prawn culture has started. More shocking is that two prawn farms have started operating in an island of Pulicut lake, home to thousands of flamingoes in winter. What disaster will take place, when this lake turns into a big cess pool ?

To utilise the brackish water of creeks and sea and to utilise them for drainage of effluent water, lands situated on both sides of such creeks are being converted into prawn ponds. Many aqua companies have started prawn ponds covering more than 1500 hectares of land by the side of Kandaleru creeks of Nellore district of Andhra Pradesh. A killer disease struck the ponds in the current year (1994) and most of the ponds (about 900 hectares) were affected, because this creek is utilised both for drawing of water and for discharge of effluent water from these prawns ponds. West Godavari district was no exception.

If one takes note of a company like WATER BASE owned by one of the corporate giants of India, one will realise the dimension of the disaster looming large in coastal horizon of India. The total quantity of water (both brackish and sweet) stored in its 306 hectares of prawn pond is 3.06 billion litres. At

an average rate of 15 percent of stored water exchanged per day to maintain water quality of the prawn ponds for its prawns to grow, it discharges polluted water to the extent of 459 million litres per day and fills up the ponds to the same extent by drawing sweet under-ground water and brackish water. This volume of water is sufficient for Madras city for two whole days. It is mind boggling to think of this scenerio. That has emerged before our eyes.

The Kandaleru disaster, problems of villages in Nellore district, the agitation in Nagai Quaide Milleth district of Tamilnadu have made both the State Governments of Andhra Pradesh and Tamilnadu to sit up. They think of passing some laws to regulate the prawn culture activities. But Governments are too weak before these acqua culture giants, who have powerful lobby both in administration and politics.

Orissa is going to face the same problem in the immediate future because prawn fever has already gripped it in recent years. The entire coastal belt from West Bengal border in the north to the Andhra Pradesh border in south are dotted with prawn culture ponds , most of them illegally owned, illegally constructed and unlawfully operated. Companies are being formed over-night either inside the State or outside the State and coastal lands are being acquired by giving financial allurement to the poor farmers. After getting a foot-hold, the neighbouring lands belonging to revenue department or forest department are being encroached upon and big prawn ponds are coming up.

According to official reports, about 6046 number of prawn ponds covering about 10,860.93 hectares of coastal land , have come up for prawn culture by October, 1994. It is an under estimation, because there is no regulation under which a prawn culturist is expected to report to the Government or to take permission of the Government. According to non-official

estimate, at least 20 thousands hectares of coastal land have already come under prawn cultivation, out of which a major portion is Government land illegally occupied by prawn culturists. On the plea of development, the administration has shut its eyes to all these illegalities. Virtually there is unholy alliance between the administrators, politicians and prawn culturists. Politicians belonging to almost all political parties and also high bureaucrats are actively involved in prawn culture. Agriculturists, poor people and the entire fishermen community living on the coast have already become helpless in this entire game of money - making.

The discontent amongst the coastal people is gradually surfacing, resulting in protests and demonstrations. A section of the administration, particularly at lower level, is being utilised by big prawn culturists to suppress this discontent. Often the village leaders are purchased to maintain permanent division among the people so that the discontent of the people cannot result in a united effort by them.

The tragic firing on prawn culture protesters in Adhuan village in Basudevpur P.S. in Bhadrak district of Orissa resulting in death of two young fishermen on last January 13 (1995) is the first tragic incident of India which is bound to repeat in coastal villages of the country in coming days. It is nothing but a clear case of collusion between the prawn culturists and officers to strike terror in the minds of the villagers so that they do not dare to protest in future.

Big prawn companies have started constructing huge prawn ponds on Government waste land (culturable waste land as mentioned in revenue records) forcibly near Adhuan village for the last three years. Despite protest of the people for these illegalities, the district administrative machinery kept quiet and went on supporting the prawn culturists. The people were forced

to come to the street and had a peaceful demonstration before the prawn farms on January 12, 1995. In the dead of night, when the villagers were asleep, the local police forcibly entered the house of a few persons against whom complaints by prawn culturists were made. When the police jeep was driving through the village with arrested persons, the villagers surrounded the jeep and enquired about the truth of the matter. They did not allow them to go unless some high officers come and explain them the reasons of the arrest. Till the next morning the police people were treated with all courtesey and provided with food . But the morning of January 13, 1995 saw armed police coming to the village in a jeep and without discussing with the people drove away brutally shooting at the crowd from behind the jeep. Gopal Mallick, a young fisherman died in the spot, whereas Chandrakanta Mallick died in the hospital. About six persons were wounded in the firing, who were hospitalised.

This is the price of life before the money- hungry prawn culturists.

Taking advantage of the policy of the State Government to give some share of land to educated unemployed and farmers to undertake prawn culture, many farms, bureaucrats and politicians have applied for lease in benami and some have already got it . Bhitara Kanika Sanctuary, mangrove forest land in Mahanadi and Devi estuaries, mangrove forest areas on the coast of Bhadrak district, the entire coast of Balasore and Ganjam districts have been acquired legally and illegally with the direct connivance of ministers and high bureaucrats.

Land ceiling law is being blatantly violated, when most of the prawn culturists have acquired land beyond the ceiling limit. Some times records have been manipulated to evade the law.

The Land Reforms law have been violated nakedly when lands belonging to Scheduled Caste and Scheduled Tribe

population have been illegally and unauthorisedly transferred to them, without prior permission of revenue authorities.

The forest law has been violated when prawn ponds have come up by forcibly occupying forest land. The forest conservation act is blatantly trampled under feet when the forest area is being utilised unauthorisedly for non-forest purposes, that is, for prawn culture. Besides many small culture ponds, ten big companies have started operating within the limit of Bhitara Kanika Sanctuary in contravention of Wild Life Protection Act and Coastal Zone Regulation.

The Environment Protection Act, Water Act and Coastal Zone Regulation have been thrown to the winds by all these prawn culturists as they are discharging all the effluent and highly polluted waters to the tidal rivers, creeks and to the sea without any treatment. The Environment Department of Orissa Government and State Pollutions Control Board never poke their nose into such a devastating situation because the political and administrative masters are in league with these prawn culturists.

The normal revenue law prohibits obstruction of rivers, natural water flow channels by any authority or person. But in many places, the powerful local leaders have closed these channels and resorted to prawn culture inside the natural channel or by the side of channels to take advantage of brackish water. The Revenue Department is a silent spectator or an abettor in such criminal offences, while they are obstructing the channel or encroaching on waste land.

In each of these cases more than one laws as mentioned above are being violated, but the administration backs them because they control money power, muscle power and sometimes political power directly or indirectly.

This alarming situation which is developing in Orissa coast has posed a serious set back to maintenance of law and order.

To continue their strangle-hold in the area, the prawn culturists are often responsible to divide the rural community in all nefarious ways.

This is the tragic scene in coastal Orissa. Andhra Pradesh and Tamilnadu are already grappling with the same problem for the last few years. The poor fishermen will lose their means of livelihood; the poor agriculturists will lose his only asset, the land; the landless labour will gradually lose his labour in agriculture fields; pollution will pose a great hazard to the coastal rural community, and all will lose the drinking water source, when ponds or wells will go dry or go saline. At last all the agriculturists around the prawn ponds will gradually lose their agriculture production, when the entire agricultural land will be polluted by effluent seepage and discharge. Community's health hazard will pose a serious problem. In the process the rural community will be at the mercy of goondas, mafias and bootleggers. The self-respecting coastal rural community ultimately will be refugees in their own area to be thrown out as destitutes, as it is happening in prawn-affected Andhra Pradesh and Tamilnadu coastal villages.

After all, who benefits from prawn culture, excepting a few who worship at the feet of God of Mammon and become brutal in mind and callous and insensitive to the deprivation of the common people. It snatches away the livelihood of the coastal people, mainly the fishermen community and poor agriculturists living on the coast, destroys the coastal ecology and resources, and takes away the cheap protien food from the mouth of local poor people. The purpose is only to supply prawn dishes to richer sections of industrialised world, particularly Japan, U.S.A. and Europe and to earn foreign money for a few to go rich. Even the State does not get any benefit because all sorts of fiscal support and incentives are provided to the prawn culturists at the cost of State Exchequers.

What happened in Thailand, is bound to happen in Indian coast. In the words of Irsse Ceavis who is an United Nation's aqua specialists (1993).

"The shrimp farmers in Thailand have left behind an ecological desert. These farms are not used for shrimps, are hardly useful for other economic activities. Outside investors are enriched, local people are pauperised. Development runs above their heads -Very little trickles down to them".

Those who clamour for development by talking of Thailand, Phillipines, Taiwan and other South East Asian countries or at home by citing examples of Andhra Pradesh and Tamilnadu, should get prepared to see this disaster before their own eyes.

Mr. Ian Baird, on behalf of Earth Island Institute, Sanfransisco after surveying the shrimp culture development in all the Asian countries in his document captioned "The Environmental and Social costs of Developing Coastal Shrimp Aquaculture in Asia" (July 1993) concludes as follows:

"The Shrimp Aquaculture Industry is now a multi-billion dollar industry in Asia, and it is widely believed that the industry will continue to grow throughout the 1990s. But despite the amazing increase in production and export of cultural shrimp from Asia, the environmental and social

costs of expanding the industry have been heavy, and largely disregarded by Governments and multi-national corporations involved with intensive shrimp culture".

"Apart from being the Biggest cause of mangrove forest destruction in Asia, shrimp farming has also contributed to coastal pollution, ground water contamination, subsidence, farm land contamination, and other environmental problems. In the end, millions of small-scale fishers and farmers have been marginalised and displaced by the shrimp farming industry. With farm land ruined and coastal fisheries in decline, Governments and investors need to reevaluate the industry and consider how much the intensive culturing of shrimp is costing society and the environment. Many Asians are already finding that supplying expensive shrimp to industrialised nations is not such a good deal after all, but for now, the ones in charge are continuing to promote the industry and disasters that come with it. For the poor, the struggle continues."

These are the prophetic words that will materialise in the lives of all the coastal people. That is why **Orissa Krushak Mahasangh** appeals to all to foresake the path of disaster and not to listen to the sweet words of those who in name of development are serving the interest of a few get-quick-rich section. The Orissa Krushak Mahasangh further urges upon the Government of India to stop promoting such a harzardous economic activity and frame stringent regulatory measures to save the coast and its people. Such an unpalatable advice of ours is to be given in the interest of our common men who will loss their livelihood and with it, their honour and dignity.

(This document was prepared in 1994 and submitted to the Agriculture Ministry and Environment Ministry of Union Government for putting pressure on them to pass a law or a regulation to control prawn culture to save the coastal ecology and coastal people. Some of the facts about Andhra Pradesh and Tamilnadu have been collected from a note of the PREPARE, Madras and from other newspapers. Subsequently after the gruesome incident of firing on prawn culture protesters at Adhuan in Orissa and repression on the coastal people in other parts of India, it has been revised).



SUSTAINABLE DEVELOPMENT OF SHRIMP FARMING

by Dr. Alagarwamy

Director, Central Institute of Brackish Water Acquaculture

In 1987, the World Commission on Environment and Development defined that "Sustainable development implies the ability to meet the needs of the present without compromising the ability of the future generations to meet their own needs".

A more elaborate definition of the Food and Agriculture Organisation of United Nations in 1988 is that "sustainable development is the management and conservation of the natural resource base and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such sustainable development (in the agriculture, forestry and fisheries sectors) conserves land, water, plant and animal genetic resources, is environmentally non-degrading, technically appropriate, economically viable and socially acceptable".

The cardinal principles of sustainable development can be stated as:

- ☞ social acceptability
- ☞ equitability
- ☞ economic viability
- ☞ technical appropriateness
- ☞ environmental soundness, and
- ☞ conservation of resources.

These are interlinked with one another, and a holistic and matrix approach is required to achieve sustainable development.

3. Critical issues of sustainable development of shrimp farming.

3.1 Social acceptability:-

The problems encountered are:-

- i) Indiscriminate conversion of agricultural lands into shrimp culture
- ii) Aggravating landlessness by purchase of large areas from small and marginal agricultural farmers
- iii) Absentee land owners selling away land to aquaculture enterprises, thereby dispossessing the lessees from their livelihood occupation of agriculture.
- iv) Loss of employment opportunities as aquaculture provides far less employment as compared to agriculture.
- v) Women in agriculture totally deprived of their employment due to conversion of land into aquaculture.
- vi) Hemming effect on coastal villages being surrounded by shrimp farms in all directions and loss of direct public access to places of their social, vocational and recreational activities, including to seashore for fishing.
- vii) Flooding of villages due to obstruction of natural flood drains by large farm dykes, and
- viii) Salinization of drinking water wells, dwelling units adjoining agricultural lands and aquifers.

3.2 Equitability :-

These issues are strongly linked with social issues:

- i) Impact on livelihood security
- ii) Shrimp farming is capital intensive and not labour intensive.
- iii) The economic growth and benefits are seen at the national level and not at the local level; the high profits are removed from the production centres; the rich become richer and the poor become poorer
- iv) Lack of participatory approach at local level

- v) The products are meant for 100% export to developed countries and does not help nutritional security

3.3 Economic viability :-

- i) The shrimp culture projects are economically viable in the present trend of global demand and supply position
- ii) In the event of any market crash as it happened in 1989, there could be problems
- iii) Total absence of strategy to promote internal market for shrimp at affordable price
- iv) Single species preference on tiger shrimp despite environmental constraints of temperature and salinity in many States, and
- v) Uncertainty of WTO's future role on imposing non-tariff barriers

3.4 Technical appropriateness :-

- i) Problems relating to siting and design of shrimp farms
- ii) Total lack of knowledge with farmers of negative feedback of environment beyond its carrying capacity and self-polluting effects of aquaculture
- iii) Imported technology with short-term contracts has targetted high profitability in the first instance but had no long-term interest in sustainability
- iv) Massive indiscriminate efforts on wild seed collection of tiger shrimp fry in the estuaries and surf lead to large-scale destruction of natural resources and bio-diversity
- v) Premium placed on single species of black tiger shrimp irrespective of environmental constraints; no attempt at diversification and alternate crop systems
- i) In the absence of quality standards for hatchery- produced shrimp seed and with the widening gap between demand and

supply, there is too much of rush to hatcheries that leads to purchase of under-sized as well as poor quality seed; cost of seed has gone up more than 5 times during the last two years

- vii) Use of very high stocking densities under semi-intensive and intensive systems without consideration to ambient environment
- viii) Lack of proven technologies for diversification, polyculture and integrated farming system
- ix) Unscientific use of fertilisers, chemicals and drugs
- x) Irrational use of wet feeds and pellet feeds, and improper feeding strategy
- xi) Absence of scientific knowledge with the farmers on the biotic and abiotic changes in the ponds and the environment due to shrimp culture
- xii) Lack of information on water and soil quality parameters and their management for own benefit and for the benefit of farms in the general area using the same common property resource
- xiii) Absence of solid and liquid waste(effluent) treatment facilities
- xiv) Outbreak of epizootic diseases due to poor husbandry practices, animal health management and water quality maintenance
- xv) Absence of technical extension system qualified and competent to deal with problems
- xvi) Overwhelming concentration on technologies for short-term gains rather than on long-term sustainability, and
- xvii) Absence of cooperative efforts in ensuring common interest

3.5 Environmental soundness :-

The problems of environmental soundness are derived from the issues relating to technical appropriateness. They are:-

- i) Destruction of mangroves for establishing shrimp farms, and thereby causing innumerable problems for aquaculture itself; impairment of the buffer zone between land and sea and destruction of natural resources and biodiversity
- ii) Wrong siting of farms in environmentally sensitive or inappropriate areas
- iii) Fragmentation of beaches through construction of sea-water intake system and open-cut drainage channels
- iv) Ecological destruction leaving the coastal areas more prone to cyclone effects and tidal waves
- v) Spoiling of the heritage sites, Ramsar convention sites and sites of cultural significance
- vi) Ponds dug along long coastline without break and spoiling aesthetics of the coastal zone and preventing open access to the beaches
- vii) Interference with routes and residence of migratory birds which travel thousands of nautical miles for wintering
- viii) The water pollution problems due to discharge of untreated waste water containing large amounts of settleable solids, organic waste and nutrient load, sometimes with traces of chemicals and drugs, which would lead to hyper-nutrication and eutrophication
- ix) Dumping of solid wastes (pond sludge) into the environment
- x) Absence of monitoring and regulatory mechanisms and, where present, poor implementation of the same
- xi) Salinization of soil and water affecting livelihood requirements and agriculture, and
- xii) Extraction of groundwater for extensive use and mixing

purposes and salinization of aquifers as well as land subsidence due to reduction of aquifer capacity to hold the land above

3.6 Conservation of resources :-

- i) Undue and unregulated development of shrimp farms in coastal and brackishwater area
- ii) Destruction of mangroves and thereby the biodiversity thereof
- iii) Indiscriminate exploitation of wild seed resources and destruction of by- catch
- iv) Likelihood of further species to be added to the Red Data Book due to heavy interference with the coastal ecosystem, in the event of unregulated development.
- v) Possibility of gene erosion of local species due to inbreeding in aquaculture
- vi) Potential threat from introduction of exotic species of shrimp to native species in the event of not following the International Codes of Practice for Transfers and Introductions

3.7 Manage and develop :-

The issues relating to sustainability of shrimp farming have been outlined with reference to the six cardinal principles encompassing social, economic, environmental and conservation issues. All the negative aspects are not directly applicable in the present context of development of shrimp farming in India. But the compendium should help in taking a pro-active approach to the issues raised in order to ensure that shrimp farming is directed, guided and regulated towards sustainable development for long-term benefits.

There has been a great amount of national debate on these issues, and guidelines, regulations and legislations on aquaculture are under finalization, keeping in view the provisions under the Water (Pollution Control and Prevention) Act, 1974 as amended and the Environment (Protection) Act, 1986, and the Coastal Regulation Zone (CRZ) Notification, 1991 under the latter.

The needs and aspirations for economic development of the developing countries are qualitatively, and quantitatively different from those of the developed world as judged from the parameters of population size and quality of life. India as a country committed to the recent Rio Declaration. Biodiversity Convention and the post-GATT World Trade Organization, and as a developing country with aspirations of economic development, has to strike the 'middle' path or the 'right' path with regard to the development of aquaculture in general, and shrimp farming in particular, so that environment protection and development programmes are made mutually complementary and not exclusive, in the spirit of Agenda 21 or Rio Declaration.

[Dr. Alagarswamy, Director CIBWA under Indian Council of Agricultural Research prepared a Background paper for a National Seminar on Sustainable Shrimp farming organised by various reputed expert bodies with the support of Ministry of Agriculture of Government of India in January, 1995 at Madras. A part of the Background paper dealing with various hazards of Brakish Water Acquaculture on the path of sustainability is reproduced above.]



ADHUAN: THE PRAWN WARS COME TO INDIA

By Alfredo Quarto,

Director, Mangrove Action Project.

"Don't pluck a leaf from a tree at night...

Like you, the tree needs its rest too!"

-: Mahatma Gandhi, India, 1920s

The road to the Indian village of Adhuan is lined with trees. The nearby paddy fields are ploughed by teams of massive bullocks dragging great, heavy wooden ploughshares behind them. Dark brown furrows are left in the soil, as barefoot farmers coax their teams onward. The rice will soon be planted, and another seasons's crop begun. The land takes work, but it gives sustenance in return.

Along the narrow road, some trees stand, gnarled and weathered. They are over 100 years old. Some time ago, these roadside guardians were destined to be cut so that the road could be expanded. In fact, some trees had already been cut in the night by state work crews. Raising a strong protest against this project, local communities, spearheaded by one of India's leading "green activists". Sri Banka Behary Das, stopped the project in its tracks. Now the trees still stand, along the narrow stretch of roadway protected by law.

Many of these old trees were planted during the past rule of the British "raj". They are well-loved by the people of Orissa, India. The trees-Banyan, Bara, Coconut, Cashew, chakunda, and many others- play an important part in the lives of these people. The Orissa State Government, hungry for development and modernity, had misjudged its people, once more. The Orissa citizens were outraged by the government crews felling their trees. " In the night, like common thieves". Shri Das

complained.

He had stopped this same government's plans for "progress" twice before. Once he halted the establishment of intensive shrimp or prawn farms on the shores of magnificent Lake Chilika. Later he halted an ambitious, but wasteful hotel/resort complex, which would have cleared an immense forest tract located between Konark and Puri on the coast of Orissa. Both projects had strong government backing, yet both were defeated by Shri Das's impassioned appeal for ecological health and justice. Now the State Government seethes; its ambitious plans halted three times in as many years. But, like an ill-tempered cat, an ambitious government has many lives.

Recently, prawn aquaculture again came to Orissa's coast. But this time, no one was prepared to stop its dangerous seeds from taking root. As in other coastal states of India, and as in other coastal nations in the Southern Hemisphere, prawn aquaculture has come, invited by lean governments of developing nations hungry for foreign exchange earnings from prawn exports. And, prawn farming is one of the "hottest shows in town". Immense profits can be made in no time. But at what cost?

This \$7 billion(US) industry has run like a virulent epidemic along the coasts of many nations World wide. It has destroyed millions of hectares of invaluable mangrove forests, farm lands, and fisheries. This boom/bust industry has a short life, usually prawn ponds last just a few years before being closed down due to insurmountable pollution problems. However, the wealthier entrepreneurs simply open new farms elsewhere, in areas not yet affected by pollution. As this industry progresses along a host nation's coast, it literally takes up all available shorelines which might suit their prawn pond establishment, while leaving behind a desert of abandoned ponds, salinated waterways and wells,

and poisoned farm lands. This "scorched earth" enterprise also causes local fisheries and farm production to decline, thus ruining many traditional livelihoods for indigenous fishers and farmers.

How can such an obviously devastating enterprise gain such strong footholds in so many developing nations? The answer is simple - potentially outrageous profits, governmental corruption, and industry greed. These are all the ingredients needed in an economic recipe for disaster. And, this steamrolling enterprise is so irresistible that it has received World Bank loans of over a billion dollars (US) to establish itself in Third World countries. Ostensibly, these loans have been granted "to improve the struggling economies". Instead, they have helped deliver poor farmers and fishers to the gaping maw of endless poverty.

Only a few are getting rich from prawn aquaculture, while countless coastal dwellers are being displaced from their lands-homeless, jobless, and city-bound to the cities, they become unskilled labourers in hostile and overcrowded conditions. Their landed cultures have been destroyed, their traditional livelihoods ruined, leaving their communities and families in disarray. This is the true bounty of prawn culture, a harvest of poverty multiplied many fold and wreaked upon the poor. They were once poor farmers and fishers, but now, thanks to the so called "blue revolution", they are impoverished and ruined by the success of this industry that destroys almost everything it touches.

Unfortunately, when prawn aquaculture returned to Orissa, Shri Das was enmeshed in a struggle to save the Bhitara Kanika Wildlife Sanctuary. But when he heard about the attacks on coastal villagers in Tamil Nadu, in southeastern India, in September, 1994, he became alarmed. Over 30 village homes in the village of Moovakarai were burned by thugs, allegedly hired

by the nearby prawn farms. The villagers were being punished for protesting that the prawn ponds were contaminating their farm lands, ruining their livelihoods, and poisoning their drinking water. But, their protests brought down the heavy hand of the prawn culturists. The villagers were warned that further violence would follow if their protests continued.

An unknown bacteria or virus afflicted the prawn industry of Andhra Pradesh, also in southeastern India. Huge losses struck the expansive industry established there. Thousands of small entrepreneurs went belly-up along with their dying prawns. Tremendous hardships hit a once burgeoning industry there. This is one of the prawn industry's characteristics- It's a big gamble, one in which only a few win, but, as happened in Andhra Pradesh, most lose.

Sri Das quickly mobilized his forces, mainly young volunteers, students and fellow activists. He began to turn his full attention to the troubled coast of Orissa.

Then, it happened. At the small coastal village of Adhuan in District Bhadrak- the first blood was shed in India's own war of the prawn ponds. A local newspaper reported "Panic Grips Adhuan village".

"Adhuan village, under the Basudevpur police station (was) the scene of Police firing on January 13 (1995) in which two people were killed and five others injured. The villagers are living in panic....The five hundred inhabitants of the village, mostly fishermen, earn their livelihood by fishing in the sea. They have not stirred out since the firing incident for fear of reprisal by the police".

The "incident" was related to mounting protests over prawn aquaculture along the coast near Adhuan. Tensions had been

growing for a long time. Three years ago, land was cleared along the coast near Adhuan, preparing the way for prawn ponds. Mangrove forests, though protected by law, were illegally cut, and the forest lands-public lands - illegally occupied. Also, the prawn farm entrepreneurs obtained lease rights for, or bought outright, adjacent lands, and they began preparing their prawn ponds.

The prawn farmers were relentless in their pursuit of Maw coastal lands. What was not already cleared, they would clear and often, unlawfully, occupy. Around 5000 local villagers were employed to help clear away the remaining mangrove forests. All of this was done contrary to the law, and on lands meant to be protected. The prawn farms had no right to be there. But corrupted government officials have a way of not seeing, and their laws are bound in books that few people read.

The prawn farmers soon laid off the majority of local people whom they had employed, retaining only a few score to carry on the laborious tasks of preparing the ponds for production. Those who were laid off, returned to their old ways of livelihood, or, at least they tried. They were soon aware that something was amiss. Their coastal waters, once abundant with sea life, were not the same. Their fishing was less productive, and they earned less income. Wives complained of shortages. Children went hungry. Agricultural crops began to show signs of decline. When their drinking water, which came from their wells, became salty, they began to question why ?

Meanwhile, the prawn culturists were happy. Their ponds were profitably operating, new ponds were being readied for massive production of prawns- all of which would be exported to distant lands to the North, far from "Old India", and further from the reality which the fishers now encountered there on the coast in the village of Adhuan.

The villagers complained to the prawn farm owners, telling them of their problems since the prawn farms came. When the villagers demanded compensation, the owners merely shrugged. When these villagers tried to access their old fishing areas, the owners told them that they could not take their old routes to the sea, since these passed by their prawn farms. And, the villagers supplementary means of livelihood- salt collection from the seashore- was also off-limits to them. It was apparent that the "good neighbour" relation between prawn pond owners and fishers was over. But, for the people of Adhuan, the war had really begun much earlier. The first casualty had been their mangrove forests, the second, their livelihoods. Slowly, the battle approached their very homes.

On January 12, 1995, the protesting villagers of Adhuan began a slow, tense march towards the sea, and towards the encroaching prawn ponds. Their target was a prawn company, called "Deep Sun". It had been marking off an additional area for a new pond plot of around 25 acres. A fight ensued between villagers and aquaculture workers when the former began to remove wooden stakes demarcating the plot's boundaries. The confrontation did not last long. The villagers, having made their point, left.

The prawn farm owners were furious at the villagers' intrusion. They met together and decided they would tolerate no more "molestations" from the villagers. They would call on the law to arrest the ring leaders of Adhuan. Intimidation, they believed, would squash such nascent uprisings.

Police Chief Inspector Gyana Nayak was reluctant to send a squadron of his men all the way from Basudevpur Station to Adhuan. It was already evening when he agreed to the strident

demands of the prawn farm owners. The police Chief Inspector told his men to carry out their duties swiftly, arrest a certain village leader, then leave.

The police arrived at Adhuan village late at night, when the village was asleep. Aiming to get this unpleasant job over, they moved quickly. Bhikari Mallick, 60, a political activist and an elected village representative, was sound asleep when a loud knock on his door roused him. Sleepily, he went towards the door, however, his teenage daughter arrived first. She tried to keep the police outside but they shoved her aside, screaming and entered. The whole household was wakened in a confused and alarmed state. Other neighbours came running to see what was happening. Soon the whole village was astir.

The police tried to hurry Bhikari to their waiting jeep, but a crowd began forming. Villagers asked for an explanation of "Why had the police come and what had Bhikari done wrong?" The police tried to ignore their questions, repeating only that they were taking the prisoner to their station in Basudevpur for questioning. That's all they were at liberty to divulge. The crowd grew angry, and demanded a fuller explanation. They surrounded the police vehicle, and refused to move until some higher official came to explain this intrusion.

The police squadron was stymied. They had their prisoner, but they could not budge from the spot. They agreed to wait for the arrival of higher officials, but kept their prisoner in their vehicle. They then radioed their headquarters describing the situation. Now, both police and villagers relaxed, each side feeling that things would sort themselves out.

When daylight came, the morning was chilled, and the police asked for and were given "cha", or tea. Some food also was provided by the villagers.

But when the next police contingent arrived at Adhuan at 7.30 AM, its officers were heavily armed and prepared for battle. They drove up in two jeeps, along the narrow road. Chief Inspector Nayak was with them. There will be no compromise this time.

Some villagers shyly approached the vehicles, hoping to begin some dialogue, but the police had no time for words. The villagers were struck with terror as the two dozen newly arrived officers charged them with their long "Lathi sticks" swinging. Then, without further warning or provocation, they drew their revolvers and began firing at close range directly into the panicked crowd. Seventeen shots were fired in all. Unarmed and defenseless, the villagers scurried for safety. Two died in this violence. Several others were wounded. Bullets still mark a light pole where one man, Gopal Mallick was shot.

The police squadron reached its fellow officers and ordered them to drive off with them. The stunned men in the first "captured" jeep were wide-eyed and frightened themselves at what had just transpired. All sense and reason seemed to have vanished.

From the back of the last retreating jeep, police continued firing at the villagers. As the police vehicles sped away with their prisoner, the shaken villagers re-emerged from their hiding places, and rushed to aid those wounded and dying. Gopal Mallick died on the ground where he'd fallen, mortally wounded at close range. Chandra Kanta Mallick died at the hospital in Balasore. Gopal's 22 years old widow was left with their first baby, born only 19 days prior... from wondrous birth to calamitous death in such a short time. And, Chandra Kanta Mallick left his widow with six children to raise.

The villagers were dazed and fearful of further reprisals.

The whole situation had been blown far out of all proportion. Those wounded in body, some seriously, would recover, and start their lives again, but those deeper wounds- wounds to the very spirit and heart of the community- perhaps, would never heal. These after all were peaceful farmers and fishers, not conditioned to violence. They had never imagined that such a terrible thing would happen to them. And for what reason? They had not harmed the police officers; merely delayed their mysterious mission.

All that day, and for days to come, the villagers met among themselves and talked about the tragedy that had befallen them. Many were still frightened that the police would return in the night to arrest more of them. But further reprisals did not occur. In fact, no official word came their way, except that the District Court would hold an inquiry concerning the incident. However, the villagers do not trust this local inquiry. They prefer a higher level investigation which would involve the High Court, where a more impartial inquiry might transpire. They felt that the District Court could be too closely tied in with the local police.

For many tense days, the villagers of Adhuan awaited the investigation team. Surely, they thought, someone should come to the scene of the shooting, and at least view the spot, or interview witnesses. But no officials came to their troubled village. Meanwhile, funerals were held for their dead, and those left behind have begun to regroup their lives.

"In the Hindu belief, Rama and Krishna represent the 10th and final manifestations of the dieties, this time in human form. Each incarnation is given the responsibility to act as the guardian over all the previous creation, including past incarnations. It is now our turn to act as the guardians of this planet and all its life forms, for humankind are the final guardians".

Sri Banka Behari Das, February, 1995.

Shri Das travelled to the village a few days after the shootings. What he found there disturbed him greatly. As he stopped at neighbouring villages along the road to Adhuan, he talked to the people of the different localities. The closer he and his associates got to Adhuan, the higher the level of emotion and excitement concerning the reported killings. Neighbouring villagers were noticeably worried. Discussions of prawn farming drew many heated remarks. The local communities were not happy with the coming of the prawn farms. Too many serious social issues had arisen since aquaculture's appearance in their region.

Shri Das stopped briefly at the nearby village of Iram. Here he paid his respects at the monument commemorating a past movement. In 1942, twenty-nine of India's Freedom Fighters were massacred by British troops at the exact spot of the Iram memorial.

This was the worst incident of violence committed by the British "raj" during its failed attempt to quell the Indian Freedom rebellion, led by Mahatma Gandhi. Shri Das was one of these Freedom Fighters. He well remembers those early days of peaceful marches and rallies, when everyone worked long hours strategizing and preparing the way for the hard-won independence of India. He met and worked with Gandhi, and travelled with him during his fireless campaigns.

Two months after the Iram massacre, Shri Das, then only 20 years of age and a university student nearing graduation, was arrested and tried by the British courts for treason against the King of England. He spent three years in prison for his activism. During his confinement, he had much time to consider the future. When he was released, he continued his work in the movement.

Since then, he has been a tireless public worker, running for and holding public office within his State of Orissa, even serving as Member of Parliament. He retired from active political service over ten years ago, but continued his political work outside the limelight of public office. He often worked with farmers' movements and related social issues. In 1985, he founded the independent farmers' movement, "**Orissa Krushak Mahasangh**", and, today, continues as its President.

Since 1990, he and his organization have turned their attention to the environmental movement, especially in relation to its impact on India's struggling farmers and fishers. The troubles of the fishers of Adhuan were not a typical in India. There has been a long history of struggle against poverty and injustice, and India still has large numbers of landless agriculture workers whose very existence is a daily exercise in basic survival.

Sri Das came to Adhuan bolstered by his past successes at Chilika Lake and against the Konark/Puri hotel complex. He still had not settled the issue of Bhitara Kanika wildlife sanctuary, but the shootings at Adhuan convinced Sri Das that the prawn industry had to be stopped. When he finally arrived in Adhuan, a large crowd had already gathered. Word had preceded his arrival, and many concerned villagers from neighbouring communities had come to hear Shri Das speak, and to view the man they hoped might help them in their struggle against the invading prawn farms.

The crowd cheered his arrival. A platform had been erected for his talk. Many people gathered close around him. Shri Das talked of the struggle ahead, and the struggle behind, reminding the people of the significance of that past movement commemorated at the nearby village of Iram. He reminded them

that, for the people of this region, violence and injustice were not unknown. He reminded them of the Freedom Fighter's movement for independence. He urged them to continue this struggle for their own independence from the prawn industry. He then compared the prawn industry to the British "raj" which had ruled India unjustly for so many years. He compared these new colonizers to the "raj" of old in that they are subjugating the farmers and fishers of India once more. Overt threats and actual violence are used to quell any rebellion, and, too often, corrupt politicians and law enforcement aid the prawn industry in its plans for economic dominance.

Shri Das talked about some of the problems of prawn culture in other parts of India. He drew parallels to similar violence at Tamil Nadu and Andhra Pradesh. He told of the problems related to this industry worldwide- in Thailand and the Phillipines, in Ecuador and Vietnam, and now in India. Then, he cautioned them against despair and urged them to continue to resist the intruders. He called the villagers India's new Freedom Fighters, who are on a long march towards a genuine democracy for all its citizens, and asked them to continue their struggle in the spirit of Gandhi's non-violent resistance movement. He urged that this new movement become the Torch which would light the way to peaceful, but determined resistance for the rest of the nation.

Shri Das promised to do everything in his power to see that justice is done for the people of Adhuan. He promised to pressure the Orissa Government and the central Government for a fair inquiry into the killings and into the illegal activities of the prawn farms. He recommended that the villagers of this region follow the good example of the local communities of Lake Chilika, who recently staged a non-violent human blockade on the main road

running past the lake to protest local injustices there. There the crowd were very supportive and raised their voices in unison.

Then Shri Das looked at the faces in the crowd before him, upturned and expectant. He knew they awaited his words with almost a childish hope for protection and guidance. His voice broke and his words were full of emotion as he urged the people before him to organize among themselves, and become a strong movement against injustice. He told them that he felt personally at a loss, for he could not live up to what he believed were their expectations of him. He was only one man, and his power was limited. They, themselves, must organize and unify their neighbours in a common efforts. They, themselves, must become stronger.

After his talk, some political figures, who were running for office in the coming elections, gave supportive speeches, also condemning the police violence, and demanding a thorough and fair inquiry.

Later, Shri Das met with some of the wounded, and visited the homes of the two recently widowed mothers to offer condolences. The villagers of Adhuan huddled close to hear his reassurances that justice would be done. But, he also stressed that there was still a long struggle ahead.

When Shri Das left Adhuan, there was a deepening in his resolve to halt the prawn industry before more damage was done. He was impressed with the determination of the people to carry on their fight, but also quite aware of the power of the prawn industry they were opposing. Unfortunately, the prawn farm owners are held in immense favour by the Central and State Governments. Cloaked within the protective armour of the

"politics of economics", the prawn industry will be no easy giant to fell. There will have to be a grand-scale popular movement along the entire coast of India in co-ordination with other, starting in Orissa, his home state. And, he also knew that this had to be the place where the battle had to begin.

Shri Das knew he had won the people of Adhuan over to this new "Freedom Fight" against the "raj" of the prawn industry. He knew he could find eager volunteers to join this new militia to fight the prawn wars in Orissa. The people would stand behind him now, for he had reached them, and the people had reached him.

The road to Adhuan is narrow and lined with trees. There is really only one way in or out.

WHAT YOU CAN DO :-

Please write letters voicing your concerns to the Prime Minister of India, New Delhi 110001, India, and the Chief Minister of Orissa, Bhubaneswar - 751001, Orissa, India, asking them to ensure that a fair and thorough Investigation be undertaken into the January 13th police shooting incident at Adhuan village. Ask that those public officials responsible for these unjust killings are removed from public service and brought to trial. Also, urge these government leaders to halt the further spread of prawn aquaculture in India, and initiate investigations into the alleged illegal activities of the prawn industry in India. Especially of concern is the illegal clearing of the India's threatened mangrove forests. Please, send copies of your letters to Shri Banka Behari Das, President of Orissa Krushak Mahasangh, 14, Ashoknagar, Bhubaneswar - 751009. Orissa, India. Phone-400305.

(Mr. A. Quarto, who is the Director of Washington based Mangrove Action Project, visited Adhuan village in Bhadrak District of Orissa in the first week of February, 1995, just after two weeks of the incident of firing.)



"A nation may be judged by the way it treats its animal"

— Mahatma Gandhi —

**MINISTER
ENVIRONMENT & FORESTS
INDIA**

D.O. No.Z-12011/26/94-IA.III

22 Mar. 1995.

Dear Shri Das,

Thank you very much for your letter No. 1257/95 dated January, 21, 1995.

This Ministry fully share your concern about the unsustainable and indiscriminate spread of prawn culture units at places along with coast line as mentioned in your letter and the sufferings of those who reside nearby.

In view of the economic aspects involved and the long stretches of coastal land available, aquaculture will doubtless continue to be a significant activity. This calls for a careful assessment of the environmental impacts of this activity, and the prescription of adequate and effective safeguards. For this purpose, our Ministry has now decided to include aquaculture under the Environmental impact Assessment notification No.60(E), dated 27.01.1994 (as amended on 04.05.94) issued under the Environment (Protection) Act, 1986. Steps are being taken to finalise this expeditiously.

The environmental guidelines for setting up shrimp aquaculture units are being finalised by the Ministry of Aquaculture in consultation with this Ministry and are expected to be issued shortly. I would add for your kind information that guidelines will be circulated to all the State Governments for strict compliance.

With regards,

Yours sincerely

Sd/-

(KAMAL NATH)

Shri Banka Behary Das.
Ex-Member of Parliament and
President, Orissa Krushak Mahasangh
14, Ashok Nagar,
BHUBANESWAR - 751 009
(ORISSA)

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