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Globalisation and International Seafood Legislation: The Effect on Poverty in India

Final Technical Report

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Abbreviations

| | |
|-------------|-----------------------------------------------------------------|
| CIFT | Central Institute of Fisheries Technology, India |
| CMS | Catalyst Management Systems (Cirrus Management Services), India |
| DFID | Department for International Development, UK |
| DoF | Department of Fisheries, India |
| EIA | Export Inspection Agency, India |
| EIC | Export Inspection Council, India |
| EU | European Union |
| FAO | Food and Agriculture Organisation, Rome, Italy |
| FGD | Focus Group Discussion |
| HACCP | Hazard Analysis Critical Control Point |
| ICM | Integrated Coastal Management, India |
| MPEDA | Marine Products Export Development Authority, India |
| NABARD | National Bank for Agricultural Research and Development |
| NGO | Non Governmental Organisation |
| NRI | Natural Resources Institute, UK |
| PHFRP | Post Harvest Fisheries Research Programme, UK |
| PPA | Participatory Poverty Assessment |
| PPP | Public Private Partnership |
| QAMS | Quality Assurance Management System |
| Rs | Indian rupees |
| SEAI | Seafood Exporters Association of India |
| SIFFS | South Indian Federation of Fishermen Societies |
| SPS | Sanitary and Phyto-Sanitary |
| UK | United Kingdom |
| USA (or US) | United States of America |
| USFDA | United States Food and Drug Administration |

Executive Summary

This report is an output of the research project “Globalisation and International Seafood Legislation: The Effect on Poverty in India”, which started in June 2001 with funding from the DFID Post-Harvest Fisheries Research Programme (PHFRP). The main project collaborators were the Natural Resources Institute from the UK and three Indian partners Cirrus Management Services (CMS), Integrated Coastal Management (ICM) and South Indian Federation of Fishermen's Societies (SIFFS).

Although there are different processes of globalisation, the partners and sector stakeholders agreed that the research should focus on the impact of food safety legislation on the Indian fisheries sector. Changing international legislation, especially in the EU, Japan and USA, is having an increasing impact on the livelihoods of the poor in the sector but there is a lack of awareness and information on these developments.

Following an inception workshop in June 2001 at Visakhapatnam in Andhra Pradesh, desk and field research was carried until December 2002. The UK desk research produced papers which provided: (i) An overview of international seafood legislation (ii) A literature review of globalisation and sustainable livelihoods, with particular reference to the fishery sector, and (iii) An analysis of trends in Indian seafood exports and major markets.

Detailed fieldwork was undertaken in three selected states of Andhra Pradesh, Orissa and Kerala. The export supply chain was mapped in each state; the poor were identified within the chain along with the impact that international legislation had on them. A combined livelihoods approach and sub-sector analysis was used in the analysis.

Some of the key finding included:

- Although legislation enforced by importing countries and Indian authorities is of secondary importance (compared to a reduction in catch and over capacity) it has lead to industry downsizing and increased stakeholder vulnerability.
- Further impacts are likely when the anticipated changes and strengthening of legislation occurs. This will entail implementation of control measures at all stages of the production chain rather than only at the “processing stage” as at present. Major changes in the control systems and infrastructure will be required throughout the supply chain. To minimise industry losses there must be community participation both in resource management and in quality assurance systems.
- There is a need to enhance the ability of the poor to upgrade their systems and provide them with incentives to do so.
- There is a need to provide infrastructure and communication systems to facilitate transition by the poor to new stricter regimes of legislation and the enforcement of that legislation.
- Opportunities need to be explored to develop alternative livelihood options for the poor whose occupations are likely to be adversely affected by the changed legislation.
- Poor information flows and lack of information are hampering the development and involvement of the poor in the industry.
- Policies and their implementation need to be more context-specific.

The results from the research and the various policy recommendations were published in a number of separate papers and presented at a final project workshop in Visakhapatnam in January 2003. It is recommended that this report be read in conjunction with the main project outputs, which are presented in separate volumes and available on a CD-Rom.

In sum, the research results provide:

- An improved understanding of the link between international trade legislation, post-harvest fisheries and livelihoods of poor communities in India.
- In collaboration with a related PHFRP project, the development of a methodology and guide that combines a Sustainable Livelihoods Approach with a sub-sector analysis and tailored to the needs of researchers and development practitioners.
- Policy recommendations related to poor people's livelihoods, poverty eradication in India and access to global seafood markets have been developed and are being disseminated.

Background

The seafood processing and export industry is a major source of income and employment for many people in India; annual foreign exchange earnings from the sector exceed US \$1,000,000,000. Changing international seafood legislation, especially in the EU, Japan and USA, is having an increasing impact on the livelihoods of the poor in the post harvest fisheries sector but there is a lack of awareness and information on these developments, particularly amongst the poor. The changing legislative and regulatory requirements of export markets are thought to be marginalising those that are not able to take advantage of the opportunities presented by these changes. Using a multi-disciplinary approach the research aimed to generate and disseminate new knowledge and develop a methodology to assess the impact of changing international legislation on the livelihoods of the poor in the sector. In addition, the aim was to develop policy recommendations relating to people's livelihoods, poverty eradication and global seafood market access. The demand for the research was expressed in the PHFRP research call papers of September 2000, which were based on an assessment of research needs by Stirrat et al (August 2000). In addition, the DFID White Paper on Globalisation (2000) had discussed many of the complex issues surrounding the impact of globalisation on the livelihoods of the poor.

Food safety regulations, imposed by the EU, US and Japan challenge the extent to which the Indian fisheries, in particular the seafood export sector, is able to comply with these food standards and thus to compete with other seafood exporting countries such as Thailand and Vietnam. The EU is currently in the process of revising the food safety directives both for domestic and imported food products, which will entail a greater emphasis on the total food chain, incorporating the 'farm to fork' principle. This will require further changes to the infrastructure and processes put in place within the Indian fishing sector regarding seafood for the export market. Traceability of produce, proving that products are from a secure and safe supply source, will become an integral part of food safety policies as all stages of the food chain. This implies that products will be subject to more rigorous quality assurance systems, starting from the fishing boat or fish pond to the export processing plant through to the point of export. This may prove problematic when, for example, small quantities of produce are coming from many different sources as is the case with traditionally produced raw material supplies in many parts of India. In addition, supply may come from different production systems including wild caught prawns from both large and small fishing units as well as various types of aquaculture units. The assumption is that it may be easier for large scale producing units, in particular aquaculture units vertically integrated within a processing system, to comply with future food safety regulations including the 'farm to fork' principle than for small scale fishing units. It may result in a further polarisation and concentration of the fishery export sector, with aquaculture producing units having a comparative advantage over fishing units and in particular over small scale fishers and fish farmers. Before anything can be said about the potential impact of more stringent food safety regulations, a better understanding is required about current processes and impact of international food legislation on the various stakeholders, as this is currently poorly understood and inadequately documented.

With funding from the DFID Post Harvest Fisheries Research Programme (PHFRP) the project started in June 2001 with an inception workshop in Visakhapatnam in Andhra Pradesh. Project partners and other interested stakeholders participated in the Workshop at which the specific foci of the research were elaborated. From July 2001 until December 2002, desk research along with field research was carried out in the two DFID target states of

Andhra Pradesh and Orissa, as well as Kerala. A combination of a livelihoods approach and sub-sector analysis was used in investigating the above mentioned topics. The results from the research were published in a number of separate papers and presented at a final project workshop in Visakhapatnam in January 2003.

The main project collaborators were:

- Natural Resources Institute (NRI), University of Greenwich, UK
- Cirrus Management Services (CMS), Bangalore, India
- South Indian Federation of Fishermen's Societies (SIFFS), Trivandrum, India
- Integrated Coastal Management (ICM), Kakinada, India

Project Purpose

The overall purpose of the project, as stated in the PHFRP Logical Framework, is to contribute to the development of “Strategies and management systems to improve post-harvest utilisation of fish and its impact on the lives of poor processors, traders and consumers”. The research goal as stated in the Log Frame is as follows: “Benefits for poor people generated by the application of new knowledge to the utilisation for human consumption of fish from coastal fisheries in South Asia and coastal and inland fisheries in East and West Africa”.

The project aimed at producing a better understanding of the link between international seafood safety legislation, post harvest fisheries and livelihoods of the poor in India with a view to developing strategies and management systems to alleviate any negative impacts identified. In addition, the aim was to develop policy recommendations related to poor people’s livelihoods, poverty eradication and access to global seafood markets.

Although there are different processes of globalisation, such as those incorporating market liberalisation, as well as environmental and food safety legislation, it was decided that the research project would focus on the impact of food safety legislation on the Indian fishing sector. At the inception workshop it was agreed that the research should explore:

- a) What has been the impact of present international food safety regulations on the poor participants in the Indian fishery sector; small scale fish producers and other fish-based livelihoods, such as traders, shrimp peelers, fish processors and ancillary industries which provide services to the fishing sector?
- b) To what extent the present regulations (including the use of Hazard Analysis Critical Control Point systems - HACCP) pose challenges to existing and would-be producers, processors, and exporters?
- c) To what extent there is capacity for compliance with current international food legislation? . This not only includes the costs involved but also the extent to which institutions within India have the management and facilities to undertake this work.
- d) What would be the impact of more stringent food safety regulation, including traceability of fish produce, for the different supply systems, in particular the small scale producers, how would and could they cope?
- e) Recommendations for policy makers on likely impacts on local livelihoods, possible scenarios and ways to off-set some of the negative impacts for the poor.

- f) To what extent does the Quality Assurance Management System (QAMS) operated by the Indian authorities need to be broadened to take into account these future challenges?

Research Activities

At the inception workshop of partners and other stakeholders in June 2001 the research areas were prioritised, alongside discussion of the design survey techniques and analytical tools to be used as well as possible dissemination channels. It was decided that within the time and financial constraints available the project should concentrate its efforts on the impact of sanitary and phyto-sanitary (SPS) regulations by importing countries on livelihoods and the implications of food safety legislation for workers in the fisheries industry in India. Three Indian states were chosen as targets for this research, namely Andhra Pradesh and Orissa (which are two DFID target states) and Kerala (which pioneered the expansion of seafood exports). These three states were the subject of intensive field research so that an in-depth understanding of the issues might be formed. Prior to the field work, a number of desk studies were undertaken on more general topics to inform and expand on the state-specific information.

Between July 2001 and June 2002 NRI undertook the following desk studies:

1. An overview of international seafood legislation.
2. A literature review of globalisation and sustainable livelihoods, with particular reference to the fishery sector.
3. An analysis of trends in Indian seafood exports and trends in major markets.

Following completion of much of the desk study research, detailed fieldwork was undertaken in the three selected states - Andhra Pradesh, Orissa and Kerala. In order to answer the various research questions posed in the Project Purpose, it was necessary to know who was involved in the export industry, namely all the categories of people involved from the time the product was caught to the time it is exported. This involved a two stage field study:

Stage One: Map the export supply chain

Stage Two: Identify the poor within the supply chain and study the impact that international legislation has had on them.

The methods employed during the field studies were as much as possible standardised so that results from the three states could be compared.

Stage 1 - Mapping the supply chain

The mapping of the supply chain in the three states was undertaken by all the project partners between October 2001 and June 2002. Information on the supply chain was collected from secondary sources such as:

- Key informants from government authorities, central agencies
- Published documents of various previous projects and workshops/meetings
- Magazine and periodical articles
- The world-wide web
- Previous studies of export chains in the three states.
- In addition, interviews were held with a number of other sector stakeholders

Stakeholders identified at stage 1 include:

- Crew and owners of trawling vessels

- Crew and owners of artisanal fishing units
- Owners and workers of aquaculture farms
- Middlemen traders who deal exclusively in export species
- Peeling shed owners and workers
- Processing plant owners and workers
- Exporters
- Ancillary industries such as ice plants, transportation, headload workers etc.

Reports were prepared, reviewing the export supply chains in Andhra Pradesh (by ICM), Kerala (by SIFFS) and Orissa (by CMS).

Stage 2 - Understanding the impact of the legislation

Once the various stakeholders had been identified, further field work was conducted between March and December 2002 in each of the three states in order to analyse and understand the threats to the livelihoods of poor participants in the export supply chain. The following questions were asked:

1. Who are the poor in the supply chain?
2. What has been impact of international legislation on these?

Using a Sustainable Livelihoods framework, the main tool employed for the field work was participatory poverty assessment (PPA) in focus group discussions and individual interviews with the different stakeholders as identified during the supply chain mapping.

Separate reports were prepared on each of the three states along with a summary report. The results of the research were discussed and further elaborated at an end-of-project workshop in Visakhapatnam in January 2003. Dissemination channels and the methodologies used were also discussed.

All the planned activities were undertaken but with some delay in part arising from the FCO/DFID ban on travelling in South Asia in early 2002. Table 1 summaries the research activities, responsibilities and time frame.

Table 1: Project on Globalisation and Seafood Trade Legislation: Activities, Responsibilities and Time Frame

| Activities | Project partners responsible | Timeframe |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|
| Start-of-project workshop in Visakhapatnam in order to jointly prioritise research agenda, identify tools and techniques to meet objectives. | NRI, ICM, CMS, SIFFS | June 2001 |
| Desk research on international seafood legislation, globalisation and sustainable livelihood approaches | NRI | July 2001 to March 2002 |
| Data analysis and assessment of the main export markets for Indian seafood products, particularly the EU, Japan and USA | NRI | September 2001 to June 2002 |
| Data collection and analysis of the seafood export supply chains in Andhra Pradesh, Kerala and Orissa | ICM, CMS, SIFFS, NRI | October 2001 to June 2002 |
| Analyse the changes in the livelihoods of poor participants in the export supply chain | ICM, CMS, SIFFS, NRI | March 2002 to December 2002 |
| End-of-project workshop to present research findings, validate methodology and develop policy recommendations | NRI, ICM, CMS, SIFFS | January 2003 |
| Dissemination activities – papers, reports, web articles (Final Technical Report) | NRI | February 2003 to June 2003 |
| Further dissemination activities | NRI, PHFRP | 2003/04 |

Outputs

The following outputs were produced by the project as planned:

- Report of Inception Workshop on Globalisation and Seafood Trade Legislation: The Effect on Poverty in India
- Globalisation, Seafood Industry and Livelihoods containing sections on: Potential Impacts of Globalisation on the Fishery Sector in India and Indian Seafood Exports and International Seafood Safety Legislation
- A Review of Export Supply Chains in Orissa
- The Export Supply Chain of Kerala
- A Preliminary Study of the Seafood Exports from Andhra Pradesh
- Final Report for Andhra Pradesh
- A Case Study of Kerala State, India
- Final Report for Orissa
- Summary Report
- Report on Final Workshop on Globalisation and Seafood Trade Legislation: The Effect on Poverty in India
- Draft policy briefing papers

A CD ROM containing copies of the above papers has been produced for dissemination to all participants in the workshops and as a means of spreading the research results further.

In addition, members of the project and an associated PHFRP project produced:

- A Guide to the Analysis of Fish Marketing Systems Using a Combination of Sub-Sector Analysis and Sustainable Livelihoods Approach.

Key Findings and Recommendations for Policy Implementation

The project contributed to an improved understanding of the link between international seafood trade legislation and the livelihoods of the poor in India through in-depth analysis of the stakeholders involved at all levels of the supply chain in three states. It highlighted the following facts:

- Reduction of catches and over capacity in the capture sector has had a major impact on stakeholders in the Indian seafood export industry. However, rising export demand has kept the industry afloat.
- Although legislation enforced by importing countries and Indian authorities is of secondary importance it has led to downsizing of the industry with concentration of the industry into fewer hands and increased vulnerability of many stakeholders.
- Industry participants complain of being unable to anticipate the requirements of importing countries and their changing demands. This, coupled with what are felt to be higher enforcement standards being applied by the Indian authorities than the industry feel are strictly necessary, is disadvantaging the Indian industry. This situation has led to the industry reacting to crisis rather than being proactive.
- Further impacts are likely when the anticipated changes and strengthening of legislation occurs. This will entail implementation of control measures at all stages of the production chain rather than only at the “processing stage” as at present. Major changes in the control systems and infrastructure will thus be required throughout the supply chain from primary producer to final processor and exporter. At the individual level, a number of options may be taken:
 - Individuals continue to operate as at present but seek to circumvent the regulations (e.g. diversifying to other export markets; or certifying products incorrectly - e.g. wild shrimps rather than cultured shrimps).
 - They may opt out of involvement in export species and revert to domestically marketed species only.
 - They may opt out altogether and find alternative means of livelihood.
 - They endeavour to operate within the system.

To minimise industry losses and ensure that stakeholders take the last option there must be community participation both in resource management and in quality assurance systems. Being involved in the exercise as a direct stakeholder, and realising what the consequences would be of not complying,

the different stakeholders could work out practical and cost-effective measures to enforce the regulations in a more people-friendly manner, and in such a way that food safety would not be compromised. The current, very low level of involvement of fishermen, traders or exporters in the upkeep or running of the landing centres, jetties or harbours that they use has resulted in a lack of co-operation between the prime users and those who are supposed to maintain and service the facilities.

- In order for increased participation of the communities in decision making processes support extended by the government through MPEDA will need to be extended along the supply chain beyond the processing industries. Both financial and technical support is needed as well as lobbying and advocacy on behalf of the industry. It is obvious that they must be in tune with the government thinking in this respect both for their own and the country's benefit, it is necessary that the direct stakeholders be given a more important role in planning and implementing the changes necessary.
- Industry and government have realised that they share responsibility in the design, operation and verification of effective food control. The Indian authorities are required to set the overarching limits within which these systems operate, but the industry must design systems and operate them to meet these limits. The chain of stakeholders whose livelihoods depend on the continued sale of products into foreign markets consists of a plethora of players of different sizes and degrees of sophistication. The need to involve all these parties in the formulation of a quality management system is essential if the industry is to be sustained. The research identified weak control and management links in the supply chain and where efforts need to be directed. Whilst government might be responsible for legislation, the industry itself needs to be self-monitoring and take responsibility for auditing the supply chain. While the end product producer will take the brunt of a consignment rejection or blanket export ban the effects will be felt by all. The need for supply sources to be audited taking into account the conformity with food safety principles will be a real challenge for those conducting the audits and those being audited but the end result should be a more secure future for the industry.
- In specific terms there are a number of items of particular concern.

A bottleneck to overall improvement on the ground is the state of landing centres and hygiene at these centres. The situation at landing centres in remote coastal districts cannot be improved unless certain infrastructure prerequisites are in place such as electricity and clean water supplies, both of which are essential for maintaining the quality of shrimp/fish for export. With the lack of these two prerequisites goes the lack of clean ice supplies for preservation.

There is also a possibility that all fishing vessels will need to be registered so that some measure of on-board hygiene and quality control can be instigated.

In aquaculture, there is obviously a need to regulate the use of antibiotics and other such potentially harmful substances. The white-spot disease leads to the widespread use of antibiotics which has led to the current problems with exports to many markets not only for Indian exporters but from other sources.

The studies identified a distinct lack of information on specifics regarding the export trade. In Andhra Pradesh for instance it was necessary to make assumptions based on trade through Visakhapatnam Port to arrive at an estimate of the amount of exported seafoods. Little information exists on the numbers of people involved in the trade, the livelihood profiles of those people and their vulnerability to poverty. Several groups of the poor in the export sector – carriers, transporters, sorters, peelers etc – continue to remain invisible from a policy perspective, and their needs will need to be assessed.

In Orissa there are large gaps in the information relating to numbers of stakeholders involved in post harvest fisheries activities. In order for realistic policy decisions to be made it is extremely important for us to understand the number of players and their roles in the post harvest sector.

- In spite of the efforts by various agencies, awareness of quality regulations at ground level (including the local government extension officials) is far from satisfactory. Implementation of the regulations would be much more effective if those involved were better informed and had a better understanding of the regulations. This could lead to more consistency in interpretation of food safety norms. Before any more stringent quality regulations are implemented it is essential, therefore, to create the requisite awareness of the importance of the regulations and the effect on all stakeholders.
- There is a need to enhance the ability of the poor to upgrade their systems and provide them with incentives to do so.

It was felt that awareness and training on the standards needed for export was required for all sectors, down to the grass roots level. This should provide an understanding not only of the standards themselves but also what the negative aspects of lack of compliance might be to the various stakeholders and individuals in the export supply chain. The research indicated that at the moment many stakeholders felt that food safety was “someone else’s problem” and that if they ignored it would go away and they would not be affected. The need to make stakeholders aware that they are all responsible for health of the consumer and the Indian seafood export industry is paramount if the industry is to prosper.

It was also apparent that financial resources are not presently available to many sectors of the industry in order for them to comply with present and future requirements.

The industry itself is not in a position to impart training and CIFT and MPEDA are not able to undertake this training on such a scale as to have a major impact at all levels of the industry. Support to agencies such as cooperative societies, self help groups, NGOs and perhaps financial sources such as NABARD would be required so that they are able to implement awareness building a training activities which will have far wider reach and impact.

The remit of MPEDA should be widened to sectors of the industry other than the processing plants both for technical and financial support; meanwhile individuals may be better placed to take advantage of these opportunities by the formation of cooperatives, self help groups and associations.

- There is a need to provide infrastructure and communication systems to facilitate transition by the poor to new stricter regimes of legislation and the enforcement of that legislation.

It was felt that there is a need to demark landing areas specifically for the fishing and fish processing industries and that these need to be provided with common landing facilities such as water and landing platforms. There is dire need to ensure that these facilities are managed and maintained in a satisfactory way so as to comply with export requirements. In order to tackle this problem to the satisfaction of the importing countries it may be advisable for separate facilities to be ear marked for the export trade with domestic products being physically separated from those destined for export.

The demarcation of land for these facilities could be the responsibility of a number of bodies such as MPEDA or Fisheries Department but allocation of the land must be made in consultation with the local community and end users.

The facilities can be funded by organisations concerned with the promotion of exports such as MPEDA, SEAI, DoF but maintenance and up-keep should be guaranteed through the delegation of responsibility to an association of end users and stakeholders. This will require financial and human resources, political and administrative commitment and mobilisation of the local community. The community management of landing and handling facilities which they use will give them a sense of ownership and responsibility which presently is lacking.

- Opportunities need to be explored to develop alternative livelihood options for the poor whose occupations are adversely affected by the changed legislation.

While the project identified some stakeholders likely to be marginalised by the legislation, it was felt that inadequate information and data were available to fully understand the potential impact. A specific study is necessary to address this further. As a result both national and micro level interventions will be necessary involving NGOs and civil society.

- Opportunities need to be explored to diversify income generation and enhancement for the poor.

It was felt that there may be a number of alternative employment opportunities for those disadvantaged by the imposition of stricter legislation but that these would be specific to particular groups and locations. These might include diversification to occupations outside the industry or value addition within the industry. Whatever occupations/opportunities might present themselves it is clear that a number of prerequisites were required. These include awareness building amongst the stakeholders of these opportunities and upgrading of

skills for these occupations. This would require much greater collaboration between government departments to identify opportunities and provide the skills necessary.

Self help groups and NGOs might be important conduits for imparting these skills but the Department of Rural Development would be the most appropriate coordinating government department with ICAR institutions providing the skills upgrading. Credit will also be necessary for new occupations and this could appropriately be provided from NABARD through self help groups, NGOs and cooperatives.

The main problems likely to be encountered were identified as the excessive bureaucracy which will be encountered in government bodies that might be responsible for these activities and the fact that many of those affected feel type-cast as members of the fisheries community and feel that they have to remain in the relevant occupations.

- Poor information flows and lack of information are hampering the development and involvement of the poor in the industry.

The various organisations involved such as DoF, MPEDA, NGOs and others are lacking information and there is a need for better information flows. Information is needed on quality control and marketing issues. Information on local legislation yet alone international legislation is not available to all sectors of the industry. It is essential that awareness and training programmes be undertaken and this can be undertaken by DoF through the NGO network. A standardised “Quality/Food Safety Kit” could be produced for this purpose and disseminated through grass roots organisations. For this to be effective fisherfolk need to be involved and convinced of the need for such awareness, funds need to be available and various departments of government need to work together to bring about change.

- Policies and their implementation need to be more context-specific.

There is a need for uniform policies in the handling, fishing and marketing aspects of the industry and a uniform policy on monitoring food safety aspects. State governments need to upgrade their policies to suit the national and international requirements.

Certification for people to enter into the sector is necessary assuming that they have the required skills and abilities. These skills should be imparted through government agencies. State, central government agencies and NGOs would be responsible for this with the enactment of new legal powers. It is essential that the primary and secondary stakeholders (the industry in the broadest sense) be involved in this process.

Briefing notes are produced on each of the above broad topics as a means of bringing the policy implications and actions required to policy makers in India.

Contribution of Outputs

The following reports and papers were produced by the project:

ASHOK, M.S, CLUCAS, I.J., GREENHALGH, P., OUDWATER, N., SUPKAR, R., SALAGRAMA, V., and VIVEKANANDAN, V. (Eds.) (2001), Report of Inception Workshop on Globalisation and Seafood Trade Legislation: The Effect on Poverty in India. Report of the Workshop. 21-22 June 2001, Visakhapatnam, Andhra Pradesh, India. NRI Report No. 2675, Chatham, UK, 69pp

CLUCAS, I.J., GREENHALGH, P., and OUDWATER, N. (2002), Papers on 'Globalisation, seafood industry and livelihoods' and Indian seafood exports and international seafood safety legislation, DFID Post-Harvest Fisheries Research Programme – Project R7970, NRI Report No 2676, Chatham, UK, 51pp.

ASHOK, M.S, SUPKAR, R. (2002) A Review of Export Supply Chains in Orissa

SIMON G., VIVEKANANDAN, V. (2002) The Export Supply Chain of Kerala

SALAGRAMA, V., PRASAD D. (2002) A Preliminary Study of the Seafood Exports from Andhra Pradesh

ASHOK, M.S, SUPKAR, R., (2002), Globalisation and Seafood Trade Legislation: The Effect on Poverty in Orissa

SALAGRAMA, V., PRASAD D., MURTHY. M, (2002), Globalisation and Seafood Trade Legislation: The Effect on Poverty in Andhra Pradesh

SIMON G., VIVEKANANDAN, V. (2002), Globalisation and Seafood Trade Legislation: The Effect on Poverty in India: A Case Study of Kerala.

ASHOK, M.S, CLUCAS, I.J., GREENHALGH, P., PRASAD D, , SALAGRAMA, V., SIMON G., SUPKAR, R., VIVEKANANDAN, V. (Eds.) (2003), Report of Final Workshop on Globalisation and Seafood Trade Legislation: The Effect on Poverty in India. Report of the Workshop. 23-24 January 2003, Visakhapatnam, Andhra Pradesh, India NRI Report No. 2721, Chatham, UK, 56 pp

CLUCAS, I.J. and GREENHALGH, P., (2003), Summary Report on “Globalisation and Seafood Trade Legislation: The Effect on Poverty in India” DFID Post-Harvest Fisheries Research Programme – Project R7970, Natural Resources Institute, Chatham, UK, pp.

KLEIH, U.K., GREENHALGH, P., OUDWATER, N. (2003), A Guide to the Analysis of Fish Marketing Systems Using a Combination of Sub-Sector Analysis and Sustainable Livelihoods Approach, Draft NRI Report No. 2???, Chatham, UK, 69pp . This report was funded separately by the PHFRP and included inputs from an associated project.

In addition a CD incorporating all the above papers has been produced.

Improvements to the livelihoods of poor fisherfolk, traders, and processors in both the marine and aquaculture sub-sectors of the seafood export industry in India are expected to take place

as a consequence of a better understanding of the impact of international seafood legislation issues and the resulting policy recommendations. The involvement of important stakeholders including government agencies (e.g. MPEDA, CIFT), state fisheries departments, NGOs, and private sector organisations and donor agencies at the various stages of the project cycle should facilitate the uptake of project outputs.

The main dissemination activities involving stakeholders include the following:

- Inception Workshop, Visakhapatnam, Andhra Pradesh, June 2001;
- Final Workshop Visakhapatnam, Andhra Pradesh January 2002
- Presentations of findings in March 2002 to senior staff at the Department of Fisheries, New Delhi, Indian Council of Agricultural Research, New Delhi and MPEDA.

As for follow-up activities, the following are planned:

- Preparation and dissemination of policy briefs
- Inputs to the FAO funded project on “The implications of liberalisation of the fish trade for developing countries”, including a visit to Rome.
- The dissemination of “A Guide to the Analysis of Fish Marketing Systems Using a Combination of Sub-Sector Analysis and Sustainable Livelihoods Approach” currently in draft format.