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Subsidies in Indian fisheries-Methodological issues and implications for the future

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Introduction

Subsidies are financial contributions made by Government or public bodies which provide a private benefit. Westlund (2003) defined fisheries subsidies as "government actions or inactions that are specific to the fisheries industry and that modify – by increasing or decreasing – the potential profits by the industry in the short, medium or long-term". World attention was drawn to the scale of the global fisheries crisis and also the extent of fishery subsidies in 1992 with the publication of an FAO report, *Marine Fisheries and the Law of the Sea: A Decade of Change*. The adverse effect of subsides depend on the existing management regime and the bioeconomic conditions of the fishery. Subsidies lower the cost of harvest and raise the effective price of fish. As a management tool, cost-reducing or profit-increasing subsidies may result in increased productive efforts and hence considered as harmful through overexploitation of fish resources and unsustainable harvesting.

There have been three major studies that have collected data from governments to estimate the extent of fisheries subsidies. These studies are: Milazzo (1998); OECD (2003); and APEC (2000). In addition, the WWF (2001) has collated the data from the OECD and APEC studies and compared it with figures from the WTO. Global fisheries subsidies are estimated at US $ 30-34 billion annually with capacity enhancing and fuel subsidies accounting for US $20 to 24 billion (Sumaila, *et al*, 2010). The developed countries accounted for 55 per cent of the global fisheries subsidies and the rest contributed by developing countries. The fisheries subsidies account for a substantial amount of total gross revenues of US$ 80-85 billion from the world's fisheries (FAO, 2011).

The UNEP study (2005) distinguishes between eight different types of fisheries subsidies, namely (i) subsidies to fishing infrastructure (e.g. construction of port-facilities); (ii) management services (e.g. monitoring and surveillance, management related research); (iii) subsidies to securing fishing access (iv) subsidies to decommissioning of vessels (v)subsidies to capital costs (e.g. grants, loan guarantees) (vi) subsidies to variable costs (e.g. fuel, insurance), (vii) income supports and (viii) price supports (e.g. guaranteed minimum price).

International debates and status of the fisheries subsidies negotiations

Fish and fish products were excluded from the Uruguay Round's Agreement on Agriculture and the Agreement on subsidies govern the fisheries sector subsidies. In the Doha Development Agenda, held in November 2001 in Doha, Qatar, the negotiations on clarifying and improving the disciplines of the multilateral trade system with regards to fishing industry subsidies was approved by the WTO ministerial conference. In 2002, WTO members established the various negotiating bodies and designated chairs to lead the groups and manage the agenda. One of these groups –WTO Rules – was formed to address anti-dumping, subsidies, and regional trade agreements. In the first stages of the negotiations, WTO members identified the principal issues concerning fisheries subsidies and discussed conceptual approaches to new rules. In addition, members held discussions about the general types of subsidy programs and sought to identify the most harmful programs from a trade, conservation, and development perspective.

In the Johanneburg world summit on sustainable development, there was a call to eliminate subsidies that contribute to illegal, unreported and unregulated fishing and overcapacity. In March 2006, the first legal text proposals were introduced by countries in the fisheries subsidies negotiations. On November 30, 2007, Ambassador Guillermo Valles Galmes, Chair of the Rules Negotiating Group released the first draft legal text of fisheries subsidies disciplines, which would prohibit a broad range of subsidies that contribute to overcapacity and overfishing, provide additional flexibility in the rules for developing countries, and subject most non-prohibited subsidies to management requirements. The Chair's text proposed a "prohibited" category such as subsidies for vessel construction and outfitting and for operating costs of fishing, including fuel. Certain beneficial subsidies, such as for capacity reduction, are permitted. LDCs are exempted from the new disciplines while other developing countries are given flexibilities—especially for small-scale fishing in their territorial waters.

In May 2010, discussions were held on new text based proposal co-sponsored by Brazil, China, India and Mexico which focused on special and differential treatment and fisheries management related conditionality's on fisheries subsidies. The highlights of the new proposal were a definition based on socioeconomic criteria. The new proposal called for exempting subsidies given by all developing country members to those fishing activities where the benefits are conferred upon low income, resource poor or livelihood fishing activities. The paper also proposed an exclusion of bilateral fishing access agreements between developed -developing countries to be replaced by an exemption on access fees from rights acquired by developing country members only.

Analysis of the subsidy categories in India and the developed countries would serve to compare and to classify fisheries subsidies. According to WWF fact sheet(2009), 90 per cent of officially reported fishing subsidies are granted by Japan, the EU, the United States, Canada, Russia, Korea, and Chinese Taipei. The subsidies to the fisheries sector constitute 20 per cent of value of landings in US and 25 per cent of value of landings in EU.

Subsidies in US

Renée Sharp and Dr. Rashid Sumaila (2009) presented a detailed information and analysis on the nature and extent of subsidies to the U.S. fishing industry. By evaluating data on both state and federal subsidies, they found that government support to the U. S. fishing industry averaged $713 million per year for the period 1996-2004. The largest proportion of this money stemmed from federal and state fuel subsidies, which accounted for 11.6 per cent to 32.4 per cent of total subsidies over the 9-year period. The U.S. fisheries subsidies accounted nearly 20 per cent of the value of the catch itself.

The federal and state fisheries research funding, accounted for 3.8–35.7 per cent of total subsidies. The next three largest contributors were state sales tax exemptions (5 per cent of total subsidies), disaster aid (4 per cent), and fishing access payments (3 per cent). Federal funding accounted for 79 per cent of the total subsidies and state funding accounted for 21 per cent.

All of the subsidies included in the study were classified as harmful or ambiguous subsidies, according to the classification scheme put forth by Khan *et al.* (2006). The harmful subsidies identified included federal and state fuel subsidies, state sales tax exemptions, fishing access payments, surplus fish purchases, the CCF, seafood marketing programs, the Fisheries Finance Program, and the Fishermen's Contingency Fund. From 1996 to 2004, 56 per cent of government funds went to harmful subsidies and 44 per cent went to ambiguous subsidies.

Table 17. 1 Subsidies in US (1996-2004)

Items	Amount(in million US$)	Per cent to total
Fuel subsidies	2,825	40
Fisheries research	2,536	5
State sales tax exemptions	338	4
Disaster aid	257	4
Fishing access payments	159	2
Surplus fish purchases	117	2
Capital Construction Fund	65	1
Seafood marketing	61	1
Vessel, permit buybacks	55	1
Fisheries Finance Program	2	1
Fishermen's Contingency Fund	1	1
Total	6,416	100

Subsidies in European Union

The EU is the world's second largest fishing power after China. The subsidies to the EU fishing fleet are supposed to the highest Government support than any other country. The main source of funding up to 2006 was the EU Financial instrument for the Fisheries Guidance (FIFG). In EU funding is mainly given to building and modernization of fishing vessels and payments for access agreements with third world countries, like financial compensation for the third parties for the use of fishing waters. The European Fisheries Fund (EFF) began operating in January 2007. Its aim is to improve the sector's competitiveness and help it become environmentally, economically and socially sustainable. It has a budget of EUR 3.8 billion (or EUR 4.3 billion in current prices) for the seven-year period 2007- 2013. Funding is available for all sectors of the industry: sea and inland fishing, aquaculture, and processing and marketing of fisheries products. Particular attention is given to fishing communities most affected by recent changes. The aid for construction of new vessels and fuel tax exemptions were removed but aid for fleet modernization still exists.

The fisheries subsidies in EU included Fleet, aquaculture and processing, collective actions and infrastructures, sustainable development of fisheries areas. The Indirect subsidies included management, control, scientific advice and research. The EU fisheries sector receives about €850 million annually in structural support, including aid for modernization of vessels, and €150 million for access agreements from the EU. The EU contribution to control and enforcement as well as data collection is limited to about €50 million each. There was a steady growth in the EU subsidies from 70s to enhance industry and regional development and to ensure food supply.

According to Sumaila and Pauli, 2006, the European Fisheries sector receives almost 2.5 billion euros of aid per year, however the exact figure of fisheries subsidies is unavailable due to the wide range of financial instruments used to support the sector, including grants, fuel subsidies, contributions to social security and fuel tax exemptions. In addition, there are Agreements with non-European countries, under which the EU secures access for European fleets to African and Asian waters in exchange of financial compensation.

Fisheries subsidies in India

Government of India provides direct and indirect subsidies to the fisheries sector. Direct subsidies include those given for the purchase of vessels, gears and engines, fuel subsidy and assistance for aquaculture activities. Financial assistance for various welfare schemes, construction of ports, fishing harbours and fish landing centres and development of post- harvest and market infrastructure comes under indirect subsidies. Among the different items, subsidies to marine fisheries development infrastructure and post-harvest operations and export subsidies are considered as harmful subsides. According to the draft proposals on subsidies issued by WTO in 2007, the subsidies or grants for buying or modernizing boats, engines, fishing gear and other fishing equipment (iceboxes, GPS, communication systems, fish finders) in mechanized sectors and HSD fuel tax exemption for mechanized boats in India will be affected by the proposed WTO rules.

The Marine Product Export Development Authority (MPEDA) provides subsidy assistance for export promotion in culture and capture fisheries sectors and development of infrastructure and market promotion schemes. According to a study conducted by MPEDA in 2002, the total direct subsidy component contingent on export was negligible (less than Rs.100 crore) during the ninth five year plan when compared to the value of marine products exports of Rs. 26, 842 crores in the same period.
The Marine Product Export Development Authority (MPEDA) provides subsidy assistance for culture and capture fisheries production and trade. Some of the schemes are described below.

I. Export Production - Capture Fisheries

Financial assistance for installation of insulated / Refrigerated Fish Hold, Refrigerated Sea Water System (RSW) and Ice Making Machine on board mechanized fishing vessels, Financial assistance for the conversion of existing fishing vessels to Tuna long liners and Financial Assistance for constructing New Tuna Long Liners are covered under this scheme.

II. Export Production - Culture Fisheries

In the case of culture fisheries, subsidy assistance is given for new farm development, establishment of small and medium scale hatcheries, setting up of PCR labs, effluent treatment system (ETS) in shrimp farms and also for undertaking organic farming of shrimp and scampi.

III. Induction of New Technology, Modernization of Processing Facilities and Development of Infrastructure Facilities.

Financial assistance for Basic facilities (new) for Chilled fish / Chilled Tuna for export, Technology Upgradation Scheme for Marine Products (TUSMP), Subsidy for setting up new modern ice plant / renovation of existing plant, Financial support for acquisition of Refrigerated Truck/Containers, Financial assistance for setting up large Cold Storages Subsidized distribution of insulated fish boxes, Interest subsidy assistance for seafood units to facilitate upgradation and Developmental assistance for Export of Ornamental/ Aquarium fishes are covered under this scheme. In addition, under market promotion scheme of MPEDA, Group Insurance Coverage for workers employed in the pre-processing and processing plants is given. The premium of the insurance will be paid by the employer, employee and MPEDA in a ratio of 50 per cent, 25 per cent and 25 per cent.

The subsidies to capital construction and infrastructure in India consist of the following;

- Subsidies or grants for buying or modernizing boats, engines, fishing gear and other fishing equipment (iceboxes, GPS, communication systems, fish finders) in artisanal and mechanized sectors;
- Subsidies for land, capital costs and working capital assistance in aquaculture for small-scale and large-scale operatives;
- Equity participation
- Setting up, management and upgradation of ancillary industries – ice plants, freezing plants, hatcheries;
- Exploratory fishing and gear/aquaculture development;
- State investments in fisheries enterprises – the Fisheries Development Corporations
- Grants for safety equipment; disaster preparedness and mitigation infrastructure and equipment
- Infrastructure – ports, fishing harbours and jetties, fuel stations, access roads to fishing harbours and landing centres

Tax preference programs

- HSD fuel tax exemption for mechanised boats
- Tax exemption on kerosene for motorised boats (in Kerala)
- Income tax exemption and sales tax exemption (for sales) for cooperative societies
- Sales tax exempted for fish and dried fish and
- Reduced cess on seafood exports

The various fishery development measures like motorization of crafts and rebate on HSD oil and fishing harbor development are included under the subsidy class of WTO as they directly promote fishing operations. The assistance for fishing harbor development is considered as an indirect subsidy in the WTO definition. NFDB also promotes fisheries through development of fishing harbours, assistance to fish markets and deep sea fishing.

The total assistance for marine fisheries development was Rs.998 lakhs in 2010-11. The support to institutes like fishery survey of India, Central institute of fisheries nautical engineering, NIFPHATT, Central coastal engineering institute, integrated fisheries projects etc. are considered as favorable subsides as they promote sustainable fishing practices. The different items of subsidy in the Indian fisheries sector (Centrally sponsored schemes) are as follows:

Table 17. 2 Subsidies in the fisheries sector in India (2010-11)

Items	Amount in Rs.lakhs
1.Marine fisheries development	
a)Motorization of traditional crafts Central share (50 per cent): State share (50 per cent)	498
b)Rebate on HSD (central share-80 per cent state share 20 per cent)	936
2.Establishment of fishing habours and other infrastructure	5282
3.Welfare measures	746
4.Institutes	4376
5.NFDB	8675
6.Aquaculture	2000
Total	22,513

Table 17.3 Export subsidies (2010-11)

Export subsidies	in Rs.lakhs
Sea freight assistance scheme-for import of raw materials for preparation of value added products	
Tuna long lining	100
Development of potential farming area	679
Organic aquaculture	14.19
Digital data base on aqua farms	37
Ornamental fish breeding	209
Subsidy for promotion of aqua culture	414
Acquisition of processing machinery	1200
Technology for up gradation of marine products	105
Basic facilities for chilled fish/tuna	148
Effluent treatment plant	18
Promotion of aquaculture societies	177
Labs for quality certification	21.33
Landing centres/ fishing harbours-ice making machines and chill rooms	300
PCR lab	40.68
Total	3422.52

An international study by Sumaila and Pauly*(*2006) however identified three categories and 12 fisheries subsidy types and estimated the fisheries subsidies in India based on the subsidy amounts provided for the year 2000 in real inflation adjusted in US $. According to their study, beneficial subsidies included those amount spend for fisheries management and services, fishery research and development and maintenance of MPAs and amounted to US $ 2,77,840. The harmful subsidies included fuel subsidies and the financial assistance provided for purposes like boat construction and modernization, construction and renovation of fishing ports, market and storage infrastructure and other fishery development and support services. The amount of subsidies came to US $ 5,56, 648. The third category was ambiguous or ugly which included vessel byback and rural fisheries community development and it came to US $ 1, 91,203. The overall quantum of fisheries subsidies in India amounted to $10,25, 690.

Analysis of fisheries subsidies in different states in India
Subsidies in the marine fisheries sector of Kerala

The different categories of fisheries subsidies in the state of Kerala included the central government grant for marine fisheries development, fishing harbour development, reimbursement of sales tax on HSD oil for fishing boats and kerosene subsidy for the motorized boats. The annual kerosene subsidy to the marine fisher folk is to the tune of Rs.60 crores. The state of Kerala received a grant of 1,717 lakhs for development of marine fisheries, infrastructure and post- harvest operations and Rs.700 lakhs for fishing harbour development in 2009-10 under the centrally sponsored schemes. Government of Kerala spent an amount of Rs.20 crores for integrated coastal development activities and Rs.18 crore for fishing harbour development including the central share. The total subsidies in the marine fisheries sector of the state constitute 4 per cent of the gross earnings from fisheries.

Analysis of subsidies in the marine sector of Karnataka

The Govt. of Karnataka provides different subsidies to marine fishing sector consisting of reimbursement of HSD oil, VAT exemption and motorization of traditional crafts. In addition, the government provides various assistance schemes for the welfare of fishermen. Among these the tax exemption for HSD oil and assistance for motorization of crafts are considered as fishing effort enhancing subsidies.

Table 17.4 Subsidy given for motorization of crafts in Karnataka (in Rs.)

2004-05	9,95,666
2005-06	29,78,217
2006-07	9,15,655
2007-08	2,89,8723
2008-09	2,58,4300

Table 17. 5 Reimbursement of HSD oil in Karnataka (in Rs.lakhs)

Years	Central share	State share	Total
2004-05	728	0	728
2005-06	600	0	600
2006-07	380		380
2007-08	400	0	400
2008-09	350	0	350
2009-10	400	0	400

The total amount of subsidy given for the motorization of crafts increased from Rs.9.95 lakhs in 2004-05 to Rs.25 lakhs in 2008-09. The total amount of subsidy given for reimbursement of central excise duty was Rs.400 lakhs. In addition, the amount of VAT exemption to amount to Rs.60 crores. The amount given for development and renovation of fishing harbors and fish landing centres amount to Rs.290 lakhs in 2009-10.

Analysis of subsidies in the marine fisheries sector of Maharashtra

Table 17.6 Amount subsidies given in the marine sector (Maharashtra)

Reimbursement of sales tax(HSD oil)	6800
Fishing harbours/ landing centres	186.29
Mechanization of fishing crafts(NCDC)	3252
Installation of modern equipments	119.85
Nets	10.45
Non -mechanized boats	128.2
Total	10496.79

The states of Karnataka and Maharashtra give 100 per cent sales tax exemption to the marine fisheries sector. The total amount of subsidies given in the marine fisheries sector amounts to 23 per cent of the total value of marine fish production in Maharashtra.

Subsidies to the fishing sector have trade and environmental consequences. Eventhough WTO member countries have been negotiating to clarify and improve the agreement on subsidies and countervailing measures, there has been little progress made in formulating an international regime for the regulation of fisheries subsidies. There are several issues which require clarifications and improvements like special and differential treatment for low income resource poor countries, bilateral fishing access agreements, migratory and straddling fish stocks, IUU fishing etc. There is an urgent need to regulate fisheries subsidies due to the negative impact that subsidies have on trade, environment and sustainable development.

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