

Department of Animal Husbandry, Dairying and Fisheries
BACKGROUND NOTE FOR ECONOMIC EDITORS CONFERENCE

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1. Introduction

Animal Husbandry, Dairying and Fisheries sectors play an important role in the national economy and in the socio-economic development of the country. These sectors also play a significant role in supplementing family incomes and generating gainful employment in the rural sector, particularly, among the landless labourers, small and marginal farmers and women, besides providing cheap nutritional food to millions of people. Livestock are the best insurance against the vagaries of nature like drought, famine and other natural calamities.

2. Importance of the Animal Husbandry, Dairying and Fisheries sectors.

2.1 Contribution to the Economy

According to the estimates of the Central Statistical Organization (CSO), the value of output from livestock and fisheries sectors together at current prices was about Rs.2,82,779 crore during 2007-08 (Rs.2,40,601 crore for livestock sector and Rs.42,178 crore for fisheries), which is about 31.6 per cent of the value of output of Rs.8,94,420 crore from Agriculture & Allied Sectors. The contribution of these sectors to the total GDP during 2007-08 was 5.21%.

2.2 Employment Generation

Animal Husbandry sector provides large self-employment opportunities. According to the National Sample Survey Organization's latest survey (NSS 61st round) 5.5% of the workforce in the country was engaged in Animal Husbandry sector in 2004-05. The total employment in Animal Husbandry and Fisheries is around 5.80%.

2.3 Contribution of Livestock Sector to the Food Basket

Livestock Sector not only provides essential proteins and nutritious human diet through milk, eggs, meat etc., but also plays an important role in utilization of non-edible agricultural by-products. Livestock also provides raw material byproducts such as hides, skin, blood, bone, fat etc during 2007-08. The contribution of milk alone (Rs.1,62,136 crore) was higher than paddy (Rs.95,038 crore), wheat (Rs.71,579 crore) and sugarcane (Rs.33,691 crore). The value of output from meat group as per the estimates of Central Statistical Organization (CSO) at current prices in 2007-08 was Rs. 40,399 crore.

Export Earnings

Total export earnings from livestock, poultry and marine products was Rs. 16,277 crore during 2007-08 (Rs.8,656 crore from livestock & poultry and Rs. 7,621 crore from marine products).

2.4 Livestock resources

India has vast resources of livestock and poultry, which play a vital role in improving the socio-economic conditions of the rural masses. India ranks first in respect of buffalo, 2nd in cattle & goats, 3rd in sheep, 4th in ducks, 5th in chickens and 6th in camel population in the world. India has 57% of the world's buffalo population.

3. Achievement of this Department

3.1 Milk Production

Several measures have been initiated by the Government to increase the productivity of livestock, which has resulted in increasing the milk production significantly to the level of 100.90 million tonnes at the end of the Tenth Plan (2006-07) as compared to 53.9 million tonnes in 1990-91. It has reached 104.84 million tones in 2007-08 and is estimated to reach 110.00 million tones by 2008-09. India continues to be the largest producer of milk in the World.

3.2 Egg Production

Indian commercial poultry sector has advanced remarkably due to a scientific approach adopted by the industry and an enabling environment created by the Government. Egg production in India during the last one decade has increased from 27.5 billion numbers (1996-1997) to 53.5 billion numbers (2007-08) with per capita availability also increasing from 29 to 47 during the same period. India, as per FAO, is the third largest egg producer in the world, following China and United States.

3.3 Wool Production

Wool production at the end of Tenth Plan (2006-07) was 45.1 million kgs. as compared to 41.20 million kgs. during 1990-91. The estimates of wool production for 2007-08 was 44.0 million kgs.

3.4 Fish and Fish Seed Production

India ranks third in total fish production and second in fresh water fish production in the world. During the year 2008-2009, the total fish production was 7.13 million tonnes.

(Production in lakh tonnes)

Year	Marine	Inland	Total
1991-92	24.47	17.10	41.57
1992-93	25.76	17.89	43.65
1993-94	26.49	19.95	46.44
1994-95	26.92	20.97	47.89
1995-96	27.07	22.42	49.49
1996-97	29.67	23.81	53.48
1997-98	29.50	24.38	53.88
1998-99	26.96	26.02	52.98
1999-00	28.52	28.23	56.75
2000-01	28.11	28.45	56.56
2001-02	28.30	31.20	59.56
2002-03	29.90	32.10	62.00
2003-04	29.41	34.58	63.99

2004-05	27.80	35.20	63.04
2005-06	28.16	37.55	65.71
2006-07	30.24	38.45	68.69
2007-08	29.20	42.00	71.20

4. Eleventh Plan

4.1 Approach and Strategy

The approach to the 11th Plan envisages achieving an overall growth between 6 to 7 % per annum for the sector as a whole, with milk group achieving a growth of 5% per annum and meat and poultry achieving a growth of 10% per annum. The benefit of higher growth will be equitable, benefiting mainly the small & marginal farmers and landless labourers who maintain bulk of the livestock in the country. It will also benefit poorly endowed areas like drought prone, arid and semi-arid areas. The sector will also provide additional employment opportunities to the people in the rural areas especially to the female population who manage the livestock in the household, thereby empowering rural women with livestock in the household, proving as a source of economic empowerment. The strategy for the 11th Plan is based on the following considerations:

- (i) There is a need for institutional restructuring of the existing development machinery, both at the national and state level.
- (ii) A sustainable and financially viable livestock farming, which will generate wealth and self-employment through entrepreneurship, is the need of the day.
- (iii) The successful examples of public-private partnership should be replicated and expanded during the 11th Five Year Plan.
- (iv) Initiatives on the pattern of producers' organizations like 'Anand' need to taken up in other livestock products specially meat and poultry.
- (v) There is a need to provide efficient and effective decentralized services at the doorstep of livestock farmers.
- (vi) A mechanism for transfer of technological development to the producers' should be instituted.
- (vii) There is a need to build a line of credit to meet the requirement of livestock sector.

The Department has, accordingly, restructured some of the existing schemes and introducing new schemes for the Eleventh Plan. The Eleventh Plan outlay for the Department is Rs. 8174.00 crore. For the current year, the Department has been provided an outlay of Rs.1100 crore.

5. Development of Animal Husbandry, Dairying and Fisheries sectors

5.1 Cattle and Buffalo Development

Various Central Sector and Centrally Sponsored schemes are being implemented for genetic improvement of cattle and buffalo with a view to enhance the per capita availability of consumption of milk through increased milk production. Efforts are also made to protect and preserve the indigenous cattle and buffalo in their native tract, which are facing threat of extinction. The elite animals are selected and registered on the basis of their performance for

production of superior pedigree bulls, bull-mothers, frozen semen and frozen embryos for future breed improvements.

Genetic improvement in bovines is a long-term activity and Government of India has initiated a major programme 'National Project for Cattle and Buffalo Breeding' (NPCBB) in October 2000 for implementation over a period of 10 years, in two phases of five years each, with an allocation of Rs 402 crore for Phase-I and Rs. 775.87 crores for Phase-II. The NPCBB envisages genetic upgradation on priority basis with a focus on development and conservation of important indigenous breeds. The project envisages 100% grant-in-aid to implementing agencies. The mandate of the scheme is to:

- arrange delivery of vastly improved artificial insemination service at the farmers doorstep;
- bring all breedable females among cattle and buffalo under organized breeding through artificial insemination or natural service by high quality bulls within a period of 10 years; and
- undertake breed improvement programme for indigenous cattle and buffaloes so as to improve the genetic makeup as well as their availability.

Phase-II of NPCBB has been formulated taking into account recommendations of the evaluating agency (NABARD) and initiated in December 2006 with an allocation of Rs 775.87 crore for a duration of five years from 2006-07 to 2010-11. A major new component of Phase-II is bull production programme. India is well known for world famous Murrah buffaloes. Murrah buffaloes are high milk producers with high fat content in addition to being efficient feed converters even when fed poor quality roughages. Murrah is the breed of choice in various parts of the country as well as abroad in order to upgrade non-descript population in different states of India and also to upgrade the locally available low producing buffaloes in various countries e.g. Brazil, Italy, Philippines and Bulgaria. In spite of having best genetic resources, the productivity of Murrah buffaloes has not increased, as expected, mainly because of negative selection pressure due to poor acceptability of artificial insemination among buffalo population, availability of poor quality of sires at semen stations and use of bulls with unknown genetic potential under natural service. This situation has left the Murrah population in a state of genetic stagnation. In order to develop buffalo population, Murrah bull production programme with an allocation of Rs 128.28 crore has been taken up in Phase-II.

India is stated to be having largest breeding infrastructure in the world with 54 frozen, semen bull stations, 256 semen banks / depots and more than 76 thousand artificial insemination centres. These semen stations are producing more than 43 million semen straws per annum and about 44 million artificial inseminations are performed annually in the country. In addition to that, the country has 7 well established Embryo Transfer Laboratories and more than 100 large Cattle Breeding Farms.

5.2 Poultry Development

Poultry rearing has always been an integral component of livestock production system in India. India, with poultry population of 489 million, ranks third in the world in egg production. The broiler production is growing at the rate of nearly 8-10% every year and India produces about 2.2 million metric tonnes of chicken meat annually at present. However, the country has come a long way during the last decade increasing its value of exports from nearly Rs. 11.00 crore in 1993-94 to around Rs. 441 crore during 2007-08.

The Central Poultry Development Organizations have been playing a pivotal role in the implementation of the policies of the Government with respect to poultry. The mandate of the Central Poultry Development Organizations has been reoriented to focus on improved indigenous birds, which lay on an average 180-200 eggs per annum and have a vastly improved Feed Conversion Ratio (FCR) in terms of feed consumption and weight gain. The Central Poultry Performance Testing Centre (CPPTC) located at Gurgaon is entrusted with the responsibility of testing the performance of layer and broiler varieties. This centre gives valuable information relating to different genetic stock available in the country.

The Cabinet Committee on Economic Affairs on 25th June, 2009 approved the Centrally Sponsored Scheme, "Poultry Development" from third year of XI Five Year Plan i.e. 2009-10, at a total outlay of Rs. 150 crore. The administrative approval for the same alongwith necessary guidelines have been issued on 7th August, 2009. The Centrally Sponsored Scheme combines three components viz. 'Assistance to State Poultry Farms', (which is a continuing component) and two new components 'Rural Backyard Poultry Development' and 'Poultry Estates'.

The scheme through its 'Assistance to State Poultry Farms' component aims at strengthening existing State poultry farms so as to enable them to provide inputs, mainly in terms of providing improved stocks suitable for rural backyard rearing and so far 218 farms have been assisted under the component. The 'Rural Backyard Poultry Development' component is expected to cover beneficiaries from Below Poverty Line to mainly enable them to gain supplementary income and nutritional support. Entrepreneurship skills are to be improved through exploratory pilot component of 'Poultry Estates' wherein two estates are proposed for establishment at this stage. It is meant primarily for educated, unemployed youth and small farmers with some margin money, for making a profitable venture out of various poultry related activities in a scientific and biosecure cluster approach.

5.3 Feed and Fodder Development

The nutritive value of feed and fodder has a significant bearing on productivity of livestock. Due to increasing pressure on land for growing food grains, oil seeds and pulses, adequate attention has not been given to the production of fodder crops. Further, on account of diversified use of agriculture residues, the gap between the demand and supply of fodder is increasing. Frequent droughts in several states have also brought out the need to develop fodder banks in vulnerable areas and strategies for improving the supply/transportation of fodder from one region to other region in the country. Presently, the Department is implementing a central sector scheme viz. Central Fodder Development Organization. The centrally sponsored scheme 'Assistance to States for Feed and Fodder Development' was continued with two components viz. Enrichment of Straws/Cellulosic Waste and Establishment of Fodder Bank till third year (2004-05) of the Tenth Plan as a special dispensation in view of drought situation. To supplement efforts of States, a new scheme called 'Centrally Sponsored Fodder Development Scheme' was started in 2005-06. To mitigate the shortage of fodder due to drought like situation in the country, Department has allocated additional 2.52 lakh fodder minikits, over and above 6.8 lakh routinely given to the States, for free distribution to the farmers.

5.4 Dairy Development

India has emerged as world's largest producer of milk. The Indian Dairy Industry acquired substantial growth momentum from 9th Plan onwards and in 2007-08 the production of milk reached to the level of 104.84 million tonnes. The per capita availability of the milk has reached the level of 252 grams per day in the year 2007-08. Government of

India is making efforts to increase the productivity of milch animals to increase the per capita availability of milk.

Milk production and marketing system in India is unique. Most of the milk is produced by small, marginal farmers and landless labourers who are grouped into cooperatives at the village level. To provide them a steady market and a remunerative price for the milk produced, about 13.4 million milk producers have been brought under the ambit of 1,28,799 village level dairy cooperative societies in the country. Now the efforts of the Department are concentrated on promotion of dairy activities in Non-Operation Flood areas with emphasis on building up cooperative infrastructure, revitalization of sick Dairy Cooperatives / State Milk Federations and creation of necessary infrastructure in the states for production of quality milk and milk products. For pursuing these objectives, the Department is implementing four dairy development schemes, namely, (i) Intensive Dairy Development Programme (IIDP), (ii) Strengthening Infrastructure of Quality and Clean Milk Production (CMP), (iii) Assistance to Cooperatives and (iv) Dairy Venture Capital Fund (DVCF). Also the Department is working on a National Dairy Plan to increase milk production to 180 million tonnes by 2021-22. National Dairy Development Board (NDDB) has estimated a requirement of Rs.17371.00 crore for this and World Bank amount is being tied up.

5.5 Milk Situation in the country

This department is monitoring the milk situation in the country & reviews the price situation & milk availability regularly.

Considering the domestic demand for milk and its products during lean season (April to August), the following steps were taken by the Department:

1. Issued sanitary import permit for butter oil import (23494 MT) to balance its shortage during lean season.
2. Permission to import Skimmed Milk Powder under Tariff Rate Quota at 5% duty upto 10,000 MT during 2009-10 & 2010-11 through NDDB has been granted.
3. Export incentive under VKGUY given to milk products cattle feed and buffalo meat has been withdrawn to increase its availability in the domestic market and also to discourage slaughter of milch animals.

5.6 National Dairy Plan

In view of the increasing demand for milk & milk products by the growing population and also the scope for exports, an assessment has been made by the Planning Commission & National Dairy Development Board (NDDB) the milk production need to be enhanced from 100.9 million tonnes for 2006-07 to 180.0 million tonnes by 2021-22. In order to meet the challenge, a draft National Dairy Plan (2007-08 to 2021-22) requiring a total investment of about Rs.17,371.00 crore has been prepared by NDDB. It proposes to increase milk production through increased productivity, expansion of infrastructure for procurement, processing, marketing and quality assurance with focus on animal breeding and nutrition. It is envisaged to assist 324 high milk potential districts with loans & grants and the remaining 282 low milk potential districts with grant. The Government is exploring World Bank assistance to bring down the cost to the Government and also to provide loans at a concessional rate. Planning Commission has indicated it's in-principle approval for forwarding the Approach paper/ Preliminary Project Report (PPR) to the World Bank through the Ministry of Finance. In March, 2009 PPR has been forwarded to the World Bank for their appraisal.

Meanwhile NDDDB has been asked to prepare state specific plans to increase milk production even as the project approval is in the pipeline.

6. Fisheries Development

6.1 India has achieved significant progress in the development of the fisheries sector. With a total fish production of 7.13 million tonnes in 2008-09, India contributes 4.7 per cent towards the global production of 151.70 million tonnes. While production from Inland sector is 4.22 million tonnes, the production from the Marine sector stands at 2.91 million tonnes. The country stands third in the world in total fish production and second in inland aquaculture. The fisheries sector has registered an average annual growth rate of around 4 per cent during the last five years. As many as 14.48 million persons in the country depend on fisheries sector for their livelihood. The sector contributes around 1 per cent to the GDP and 4.72 per cent to Agriculture GDP. Fish and fish products account for approximately Rs. 8200 crore towards country's exports which constitutes 18 per cent of the national agriculture exports.

6.2 The Eleventh Five Year plan has targeted a fish production of ten million tonnes by 2012. While the production from the marine sector is reaching a plateau, the potential in this sector only remains in deep-sea fishing as against the coastal fisheries, which has been over exploited. However, there is a vast potential for enhanced production in the inland sector. While the target growth rate for fisheries sector as a whole is 6 per cent, the targets for inland and marine sector have been fixed at 8 per cent and 2.5 per cent respectively.

6.3 Development of Marine Fisheries

Marine fisheries sector forms the source of livelihood for over 7 million traditional fishermen inhabiting in 3600 coastal fishing villages situated along the country's coastal belt of 8118 Km. Besides, the sector provides direct and indirect employment for several million of coastal population in fishing, processing, trading and ancillary activities. The present harvest of about 2.92 million tonnes (2007-08) contributes substantially to marine fish export. Marine sector contributes substantially to seafood export and total foreign exchange earnings from this sector stand at Rs 8000 crore. Globally, India occupies third position in fish production, contributing about 4.7% to global fish production. India's share in global fishery trade is 2.5%, which is considered a promising alternative to combating food security in decades to come.

Considering the importance of the development of marine fisheries sector and to uplift the social-economic status of the coastal fishers, the Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture has been assisting the coastal State Governments/Union Territories for development of the sector through the past plan periods by implementing a number of Central Sector and Centrally Sponsored Schemes.

The proposal of this Department for continuation of the Centrally Sponsored Scheme on Development of Marine Fisheries, Infrastructure and Post Harvest Operations during the Eleventh Five Year Plan (2007-08 to 2011-12) at a total cost of Rs.746 crore (comprising Central share of Rs.350 crore, State share of Rs.286 crore and Beneficiaries share of Rs.110 crore) has been approved and circulated to the states with the following components:

Development of Marine Fisheries

- (a) Motorisation of Traditional Craft
- (b) Safety of Fishermen at Sea
- (c) Fishermen Development Rebate on HSD Oil
- (d) Introduction of Intermediate Craft of Improved Design including proto-type study of new intermediate vessel design.
- (e) Establishment and operation of Vessel Monitoring System
- (f) Promoting fuel efficient and environment friendly fishing practices
- (g) Management of Marine Fisheries

Development of Infrastructure and Post Harvest Operations

- (i) Establishment of Fishing Harbours and Fish Landing Centres
- (ii) Strengthening of Post Harvest Infrastructure
- (iii) Assistance for maintenance dredging of fishing harbours and fish landing centres.

Provision for taking up of innovative activities.

Details of the budget allocation and expenditure during the last financial year (2008-09) are as below:

(Rs. in lakh)

B.E	RE	Expenditure	Percentage with reference to	
			BE	RE
4500.00	4499.00	4956.26	110.14%	110.16%

During the current financial year (2009-10), an amount of Rs.60 crore has been allocated for implementation of the scheme.

6.4 Coastal Security related Issues

After the Mumbai terrorist attack on 26th November, 2008, issuance of Biometric Identity Cards to the Coastal Fishermen and uniform registration of fishing vessels have been greatly emphasized. These issues among others security related issues have been reviewed in several inter-ministerial meetings held in the recent past in the Ministry of Home Affairs, Ministry of Shipping, Road Transport and Highways and the Ministry of Agriculture involving the Coastal States/Union Territories. Besides, the Committee of Secretaries(COS) and meetings taken by Cabinet Secretary have also considered these issues for review from time to time. The action taken so far and status of these two issues are explained in brief in the following paragraphs.

6.5 Issuance of Biometric Identity Cards to Fishermen.

It was unanimously agreed to by all the State Governments/UTs in a meeting taken by Secretary (ADF) on 26th March, 2009 that the basic data will be collected by the respective States Fisheries Department through their field functionaries. The digitization of the data, capturing of biometric details of the card holders and production of biometric ID cards would be carried out through selected vendors. The Department has offered this task to a consortium of Public Sector Undertakings led by Bharat Electronics Limited (BEL).

A tentative provision of Rs.80 crore has been made to take up the project on issuance of fishermen cards to approximately 4million marine fishers.

6.6 Uniform registration of fishing vessels

Presently, the registration of fishing vessels is being done by the Coastal States/UTs under their respective Marine Fisheries Regulation Act (MFRA). However, some States like Karnataka and Gujarat are doing registration under the Merchant Shipping (MS) Act. A decision has been taken to have a uniform registration of all types of fishing vessels. Ministry of Shipping, GOI is the nodal agency in the matter of registration of fishing vessels. However, the Department is providing necessary assistance to them. The Ministry of Shipping on 24th July, 2009 has issued two notifications namely (i) notifying uniform registration format (ii) notifying the registrars.

The component of uniform registration has been incorporated in the existing CSS on Fisheries Database of the DAHD&F, through which financial assistance would be provided to both the States and NIC for rolling out the on line uniform registration system.

6.7 Soft Loan Package for Replacement of Fishing Vessels held in captivity in Pakistan

In compliance of the directives of PMO, this Department has in March, 2009 launched a scheme on Soft Loan Package for Replacement of Fishing Vessels held in captivity in Pakistan at a total cost of Rs. 19.56 crore. Under this scheme, capital subsidy to the tune of 30% cost of each vessel subject to a ceiling of Rs. 6 lakh is provided to each vessel owner for replacement of the fishing vessels seized in Pakistan. The scheme is implemented through Marine Products Export Development Authority (MPEDA). The fishing vessels of up to 20 meter size having valid fishing license/registration from the State Government are eligible to get the benefit under this scheme. Under the scheme, subsidy is provided to the beneficiary through the Bank/financial institution from which the beneficiary avails the loan. The first instalment of Rs. 100 lakh has been provided to MPEDA.

MPEDA, being implementing agency reported that some of the fishermen Cooperative societies have come forward to undertake responsibility of contributing 5% margin money, granting of 65% loan and receiving & distribution of the Central subsidy of 30% to its members whose boats have been seized and not been released by Pakistani authority. As requested by MPEDA, the proposal for slight amendment to the scheme to allow the fishermen to take part in implementation of the scheme through financing their members is presently being examined.

6.8 Deep Sea Fisheries

The geographic base of Indian marine fisheries has 8118 km. Coastline and 2.02 million sq. km. of Exclusive Economic Zone (EEZ) including 0.5 million sq. km. of continental shelf.

A large number of fin fish and shell fish stock principally consisting of sardines, Bombay-duck, ribbonfish, Indian mackerel, coastal tunas, seer fishes, penaeid and non-penaeid shrimps, stomatopoda, cephalopods, croakers, threadfin breams, silver bellies and carangids trevallies, leather jackets, scads and horse mackerel are exploited using different craft and gear combinations. Presently the estimated average annual landing of marine fish and shellfish is around 30 lakh tonnes. Marine fisheries within the territorial waters are the subjects of maritime states whereas fisheries beyond this limit and within the EEZ fall in the jurisdiction of Central Government. The Central Government besides playing an advisory role also provides funding support to the States/Union Territories for infrastructure development. The policy initiatives are required not only for making marine fisheries sustainable and responsible, but also globally competitive so that Indian producers stand to gain in international markets.

The earlier deep-sea fishing Policies viz. Charter, Lease, Test Fishing etc. were discontinued by the Government on the recommendations of the Murari Committee during 1996.

In 2000-2001, the Export Import Policy (Exim Policy), announced on yearly basis, by Ministry of Commerce and Industry, allowed import of Deep Sea Fishing vessels (DSFVs) through special import license (SIL) route. The DAHD thereafter, with a view to properly regularize and to monitor operations of these vessels decided to issue Letters of Permission (LOPs) for these 32 vessels of 11 companies. As a result thereof first batch of LOPs were issued on 04-06-2002. In order to further streamline terms and conditions of LOPs and stipulating additional conditions, a set of Guidelines for such operations were announced on 1st November, 2002, for operation of DSFVs in the Indian EEZ and amended on 06th September, 2004. On the basis of above mentioned Guidelines and considering equal opportunity to all applications for such import of vessels over and above 11 companies, applications from other applicants were also considered in DAHD and further LOPs were issued in eligible cases. A Comprehensive Marine Fishing Policy was announced in November 2004. An Inter Ministerial Empowered Committee on Marine Fisheries (EC) was constituted in November 2004 and applications for imports and operation of DSFVs in Indian EEZ are considered and approved by EC and ratified by Competent Authority in the Ministry

Regulation and management of fisheries in the Coastal/territorial waters i.e., upto 12 nautical miles from the sea shore is being governed by the respective State Government through their Marine Fisheries Regulation Acts (MFRAs). Whereas, for regulation of fishing vessels in the Indian EEZ beyond 12 nautical miles, which is coming under the jurisdiction of Central Government (DAHDF, M/O Agriculture), The Maritime Zone of India (Regulation of Fishing by Foreign Vessels) Act, 1981 (MZI Act, 1981) provides the legislative support. However, an Act for regulation and management of Indian fishing vessels in the Indian EEZ is required to be put in place urgently.

Presently there are 82 number of resource specific deep-sea fishing vessels of different categories belonging to 20 Indian Companies/Firms which have been authorized to fish in the Indian EEZ, and have been issued with LOPs by this Department. In addition, MPEDA has also provided subsidies to 225 trawlers for their conversion in to resource specific monofilament tuna long liners.

As per the fisheries statistics, the marine fish production is 2.91 million tones during the year 2008-09, out of this about 90% of fish catch is coming from the traditional and

mechanized sector from the coastal waters which is sometimes reported as over fished area whereas the area of deep-sea beyond 24 nautical miles is under exploited so far.

6.9 Development of Inland Fisheries and Aquaculture

Under macro-management approach, a centrally sponsored scheme on Development of Inland Fisheries and Aquaculture is being implemented through the State Governments / UT Administrations. This scheme covers all inland fishery resources available in the country in the form of freshwater, brackishwater, coldwater, waterlogged areas, saline / alkaline soils for aquaculture and capture fishery resources (reservoir / rivers etc.). The scheme has seven components, viz., Development of Freshwater Aquaculture, Development of Brackishwater Aquaculture, Development of Coldwater Fisheries and Aquaculture in the Hilly Regions, Development of Water-logged Areas into Aquaculture Estate, Utilisation of Inland Saline / Alkaline Soils for Aquaculture and Inland Capture Fisheries (Reservoirs / Rivers etc.) and Innovative projects. The two components viz., Development of Freshwater Aquaculture and Development of Brackishwater Aquaculture are being implemented by a single agency i.e., Fish Farmers Development Agencies (FFDAs) in the respective States and Union Territories. A network of 429 FFDAs has been established in the country.

The main objectives of the scheme are to popularize fish farming, creating employment opportunities and diversifying aquaculture practices and providing assistance to fish farmers with a view to creating a cadre of trained and well organized fish farmers fully engaged in aquaculture. In order to boost inland fish production, assistance in the form of subsidy is given to the fish farmers for construction of new ponds, reclamation / renovation of ponds and tanks, first year inputs (fish seed, fertilizers, manures, etc.), integrated fish farming, running water fish culture, establishment of fish seed hatcheries and fish feed mills etc. Assistance is also given to progressive fish farmers for purchase of aerators to further enhance the productivity of fish. Subsidy for the above-mentioned activities is given at higher rates to fish farmers who belong to scheduled tribes / scheduled castes. Financial assistance is also provided for freshwater prawn seed hatchery, laboratory, soil & water testing kits, integrated units for ornamental fish and transportation of seed in hilly areas. The expenditure towards developmental activities is being shared on 75:25 basis between the Government of India and State Governments. For UTs, Central Government provides cent percent funding assistance.

With a view to providing technical, financial and extension support to shrimp farmers in the small scale sector, 39 Brackish water Fish Farmers Development Agencies (BFDA's) have been established in all the coastal states and the UT of Andaman & Nicobar Islands. During 2007-08, additional area of about 2338 *ha* was brought under shrimp culture and 4888 fishers were trained in improved practices. Since inception of the scheme till 2007-08, about 30,889 *ha* water area has been brought under shrimp culture and 31,624 shrimp farmers have been trained in improved practices of shrimp farming and the number of beneficiaries covered under the programme is about 25,664 numbers.

Cumulative physical progress achieved by FFDAs by 2008-09.

Total Nos. of FFDA	429
Water Area brought under Fish culture (lakh ha)	77.51
Fish Farmers Trained (in lakh)	93.97
Beneficiaries (in lakh)	131.95
Average Productivity (kg/ha/year)	2600

During 10th Five year plan Rs. 88.70 crore while for the 1st two year of 11th Five year plan Rs.26.44 crore have been released to various state for the above mentioned purpose.

6.10 Welfare of Fishermen

The Centrally sponsored National Scheme of Welfare of Fishermen was launched in 1991-92. The objective of the Scheme is to provide basic civic amenities and socio-economic security to fishermen. The Scheme has the following four components:

1. Development of Model Fishermen Villages;
2. Group Accident Insurance for Active Fishermen;
3. Saving-cum-Relief and
4. Training and Extension

1 Development of Model Fishermen Villages: The objective of the component is to provide basic civic amenities such as housing, drinking water and construction of community hall for fishermen. A fishermen village may consist of not less than 10 houses. The villages would be provided with tube wells at the rate of one tube well for every 20 houses. For recreation and common working place, a fishermen village with at least 75 houses is eligible to avail financial assistance for construction of a community hall. Unit costs under the scheme is Rs. 50,000/- for a house, Rs.30,000/- for tube-well (Rs.35,000 for North Eastern Region) and Rs. 1,75,000/- for community hall.

2 Group Accident Insurance for Active Fishermen: The objective of this component is to provide insurance cover to fishermen engaged actively in fishing. Such active fishermen are insured for Rs. 1,00,000/- for one year against accidental death or permanent total disability and Rs. 50,000/- for permanent partial disability. The upper limit for insurance premium is Rs. 30/- per head including Rs.1.00 per head as the implementation fee to the National Federation of Fishermen Cooperatives (FISHCOPFED), New Delhi which is the implementing agencies for all the States/Union Territories except the States of Kerala and West Bengal which implement the component through their State Fishermen Cooperatives.

The FISHCOPFED takes a single policy for all the fishermen of the States/UTs. The amount of annual premium is subsidized by the Centre and State Governments. Thus, the benefit of this component accrues to the fishermen free of cost.

3 Saving-cum-relief: The objective of this component is to provide financial assistance to fishermen during lean season(fishing ban period). The component is implemented uniformly both for marine and inland fishers. A contribution of Rs.600/- in 9 months of fishing period is made by a fisherman and contribution of Rs.1200/- are contributed by the Centre and the State. The total sum of Rs.1800/- is distributed to fisherman @ Rs.600/- per month for three months of lean period.

4. Training and Extension: The main objective of this component is to provide training to fishers to update their knowledge and to upgrade their skills in modern fishing technology. To enhance training facilities in States, assistance is also provided for setting up / up-gradation of training/ awareness centers.

Pattern of Funding

Expenditure on implementation of first three components (Development of Model Fishermen Villages, Group Accident Insurance for Active Fishermen and Saving-cum-Relief) is shared between the Centre and the State Governments on 50:50 basis, while sharing of expenditure of these component in North Eastern States is on 75:25%. Expenditure on Training & Extension component is shared between the Centre and the State Governments on 80:20 basis. In case of Union Territories, the Government of India meets entire expenditure on all four components of the Scheme.

Mode of Implementation

The Scheme being a Centrally sponsored Scheme; the States/Union Territories are the implementing agencies except for the Group Accident Insurance for Active Fishermen component, which is implemented through the FISHCOPFED. Grants are released to the implementing agencies on receipt of viable proposals along with utilization certificate and physical performance report in respect of grants released earlier.

Evaluation of Scheme:

As per the Planning Commission's guidelines for continuation of the Centrally sponsored Schemes during the 11th Plan, the National Scheme of Welfare of Fishermen was evaluated by M/s NABARD Consultancy Services (NABCONS). The study recommended continuation of the Scheme citing its benefits including satisfactory implementation in the States. However, the evaluation study recommended enhanced unit costs for various activities under the Scheme keeping in view the rising input costs. These recommendations have been appropriately incorporated in the guidelines of the Scheme. The revised scheme has been made operational after recommendations of the Expenditure Finance Committee and approval of the Cabinet Committee on Economic Affairs(CCEA). The revised guidelines have been circulated to all the States/Union Territories. The outlay of the Scheme for the 11th Plan is Rs.180.00 crore.

Progress of Scheme

A sum of Rs 21.38 crore was released to States / UT's / FISHCOPFED during 2007-08 to cover about 1.08 lakh fishers under Saving-cum-Relief component, for construction of 5807 houses , to cover 19.7 lakh fishermen under Group Accident Insurance component and for training of fish farmers.

During 2008-09, Central assistance of Rs25.00 crore was released to States / UT's / FISHCOPFED to cover about 2.12 lakh fishers under Saving-cum-Relief component, to construct 5921 houses for fishers, to cover 33.2 lakh fishers under Group Accident Insurance and for various activities under training & extension component.

6.11 Data Base and Geographical Information System of the Fisheries Sector

The Central Sector Scheme on “Data Base and Geographical Information System of the Fisheries Sector” is being implemented by the States and Uts with 100% Central Assistance. The major components of the Scheme are catch Assessment Survey of Inland Fisheries, Information Technology Networking, Development of Geographical Fisheries and Catch Assessment Survey of Marine Fisheries. Under the Scheme, the work relate to collection of fishery statistics and imparting training on marine fisheries census. Training of data/field enumerators, etc. are also carried out. During the 10th Five Year Plan, an amount of Rs. 15.07 crore has been spent for the Scheme. The expenditure during 2007-08 was Rs.2.54 crore while for 2008-09, it was Rs.2.47 crore. During the 11th Plan, an amount of Rs.24.48 crore has been allocated for the scheme. Information System using satellite data is also being attempted under the scheme.

6.12 NATIONAL FISHERIES DEVELOPMENT BOARD

National Fisheries Development Board an autonomous organization under the administrative control of the Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Government. of India was established on 9th September 2006 at Hyderabad. The total budget provision for implementation of various activities of National Fisheries Development Board for the period 2006-12 is Rs. 2100.00 crore which has been subsequently reduced to Rs. 1500.00 crore.

Objectives of the NFDB:

- To bring major activities relating to fisheries and aquaculture for focused attention and professional management
- To coordinate activities pertaining to fisheries undertaken by different Ministries/ Departments in the Central Government and also coordinate with the State/ Union Territory Governments
- To improve production, processing, storage, transport and marketing of the products of capture and culture fisheries
- To achieve sustainable management and conservation of natural aquatic resources including the fish stocks
- To apply modern tools of research and development including biotechnology for optimizing production and productivity from fisheries
- To provide modern infrastructure mechanisms for fisheries and ensure their effective management and optimum utilization
- To generate substantial employment
- To train and empower women in the fisheries sector
- To enhance contribute of fish towards food and nutritional security

Budget details:

So far Government of India has released an amount of Rs. 171.90 crore during 2006-09. Out of Rs. 171.90 crore, an amount of Rs. 107.74 crore was released to various states and organizations for various developmental activities during the last three years.

(Rs. in crore)

S.No.	year	Budget Allocated	Funds released GoI	Expenditure byincurred
1	2006-07	30.00	30.00	3.66
2	2007-08	101.00	50.00	27.09
3	2008-09	75.00	46.90	71.34
4	2009-10	135.00	45.00	5.65
	TOTAL	356.00	171.90	107.74

Major achievements of the Board

1 Construction of SPF- *P. monodon* Multiplication Centre

With a view to supply specific pathogen free shrimp seed to shrimp farmers all over the country, NFDB has taken a lead for establishment of a SPF-*Penaeus monodon* Multiplication Centre to produce 3 billion Specific Pathogen Free seed per year with technology of M/s Moana Technologies, Hong Kong.

A Memorandum of Agreement in this regard was signed between the NFDB and M/s Moana Technologies, Hong Kong in the presence of the Hon'ble Union Agriculture Minister Shri Sharad Pawar at New Delhi on 20th March 2008. For its establishment NFDB has acquired Ac. 97.45 Cents of land at Mulapolam village of Sompeta Mandal, Srikakulam District, Andhra Pradesh. Due to change in certain design specifications, the cost of the project might undergo upwards revision. The works were entrusted to CPWD for execution. Administrative Approval and Expenditure Sanction was given to CPWD, Hyderabad for laying of approach road from Mulapolam village to MC project site. The work is nearing completion. CPWD furnished the Preliminary Estimate amounting to Rs. 5,02,00,000/- towards execution of development works (such as fresh water and salt water reservoirs , dyke & canal, main roads , internal roads, site leveling, bio security fence and guard house with main entrance gate) and Preliminary Estimates amounting to Rs 2,27,00,000/- towards execution of Sea water intake system. M/s. Moana HK Ltd has conveyed their formal concurrence for the detailed estimates given by the CPWD on site development works and seawater intake system. In this regard, CPWD furnished the Preliminary Estimate amounting to Rs 51, 02, 00,000/- for all the components of the MC project. The above estimate was sent to M/s. Moana HK Ltd for information and comments. So far an amount of Rs. 5.84 crore was released for this project.

Jump-Start Programme: In order to create awareness among the shrimp farmers in India about the SPF-shrimp seed and to test the performance of the SPF-seed produced by M/s Moana Technologies, a Jump-Start Programme was started with permission of Government of India. M/s Moana Technologies have so far supplied about 14.70 million SPF-seed in

the coastal districts of Andhra Pradesh and Gujarat covering 245 ha. The performance of the SPF-seed in the farmers' ponds is encouraging.

II Construction of office complex

For establishment of NFDB campus, 5.13 acres of land (20,760 Sqm) situated at Rajendranagar, Hyderabad was acquired from Sri Venkateswara Veterinary University, Tirupati on lease basis for 30 years for construction of administrative building and staff quarters. An MoU has been signed between NFDB and CPWD. As per the agreement, 30% of the sanctioned amount i.e. Rs. 5.86 crore was released to CPWD. Work is in progress and will be completed within 18 months with effect from 11.07.2009.

III Intensive Aquaculture in ponds and tanks

NFDB has taken up construction of new ponds in 2452 ha., renovation of ponds in 713 ha., provided 1st year inputs to 16534 ha, establishment of 24 Nos. of hatcheries, and training to 47787 beneficiaries. An amount of Rs. 25.38 crore was released to the states/organizations.

IV Reservoir Fisheries Development

NFDB has taken up seed stocking program with 100% financial assistance in 14 states. 2147 reservoirs covering 9.95 lakh ha. was covered under Reservoir development scheme. 420 million fish fingerlings of 100 mm size was stocked in these reservoirs. Rs. 49.33 crore was spent towards the reservoir fish seed stocking programme and training to 36723 fishermen in the different states in reservoir management. 1.30 lakh tons of fish is likely to be produced additionally.

V *L. vannami* culture - Support for establishment of quarantine facility at Chennai

NFDB in association with Rajiv Gandhi Centre for Aquaculture of Marine Products Export Development Authority (MPEDA) is establishing an Aquatic Animal Quarantine Facility at Chennai for regulated import of SPF- *L. vannamei* brood stock at a cost of Rs. 2.50 crore. The facility is completed for commercial operations. It has a capacity to hold 1250 animals at a time.

VI Asian Sea bass demonstration farms through CIBA

NFDB in association with Central Institute of Brackishwater Aquaculture (CIBA), Chennai is demonstrating the techno economic viability of Asian Sea bass, *Lates calcarifer* farming farmer's ponds in Maharashtra, Andhra Pradesh and Tamil Nadu by using the indigenous low cost feed. Rs. 1.54 crore was sanctioned to undertake this demonstration in farmer's ponds and Rs. 0.54 crore was released as 1st year grant. 25,000 Sea bass fry was stocked in happas in the farmers ponds and reared for a period of 65 days in all three locations. 16000 Sea bass fingerlings were transferred to pre grow-out ponds. Rearing is in progress and results are encouraging.

VII Cage culture in open seas

To popularize and demonstrate the open sea cage culture, NFDB released an amount of Rs. 1.15 crore to CMFRI, Kochi to set up 14 units of open sea cage culture demonstrations along the maritime states of India for taking up of culture of Asian sea bass, marine

ornamentals, Lobsters, mullets, pearl spot, pomfrets and marine shrimp. The CMFRI has moored 14 cages across the country (1 in Veraval, 2 in Mumbai, 2 in Managalore, 2 in Cochin, 2 in Chennai, 2 in Nellore, 1 in Kakinada, 1 in Srikakulam and 1 in Balasore and species were stocked and harvested at 4 sites. The entire management of cages in the sea is performed through fishermen group/scientists/villagers. The cages will be relaunched during September 2009 in different locations for demonstration.

VIII Establishment of common facility center for Sashimi grade tuna at NIFPHATT, Visakhapatnam

Rs. 1.85 crores was released to National Institute of Post Harvest Training and Technology (NIFPHATT) to develop a common facility centre at Visakhapatnam for Sashimi grade tuna processing. VUDA has taken up the works. Construction work is under progress. Partition work completed. Flooring, roofing and other related works will be started with in a week by VUDA (recorded on 24.07.2009)

IX Modernization of fishing harbour

NFDB has taken up Karwar fishing harbour in Karnataka for providing additional facilities to improve the fish handling, storage and marketing facilities and released of Rs. 1.04 crore. Tenders were finalized by the Superintendent Engineer, PWD, Circle Dharwad. Works will be commenced immediately after monsoon. A local fishing harbour management committee has been constituted under the Chairmanship of Joint Director of Fisheries (Maine), Head office, Bangalore to review the progress of the works.

X Installation of sea food processing plant (IQF)

NFDB has released Rs. 1.55 crore to Sasoondock Matsyudyog Sahakari Sanstha Ltd., Sasoondock, Mumbai a Co-operative federation for installation of value added sea food processing plant in the Sea food Processing Plant. Equipment is procured and installed and is being put to use.

XI Domestic Marketing

i. National Centre for Agricultural Economics and Policy Research (NCAP), New Delhi : Financial assistance of Rs. 0.52 crore was given to NCAP to conduct a study on the National fish supply demand scenario and strategies for development of domestic fish market network in the country. NCAP conducted the nation wide study on existing conditions of domestic fish market infrastructures, price behaviour and price spread and submitted the final report during July 2009.

ii. Modernization of whole sale markets: NFDB has extended financial assistance of Rs. 0.75 crore to the Tamil Nadu Fisheries Development Corporation Ltd., Tamil Nadu for modernization of whole sale fish market at Ukkadam of Coimbatore, Tamil Nadu. Steps are being taken to float the tenders.

iii. Establishment of fish dressing centers: NFDB extended financial assistance of Rs. 1.46 crore towards establishment of one model fish dressing center by Tamil Nadu Fisheries Development Corporation Ltd., (TNFDC) Tamil Nadu and for setting up of one model fish dressing centres and one solar drying of fish unit for commercial activities and for imparting training to the fisherwomen in handling, processing and packing of fish

hygienically. In respect of TNFDC, consultant has been appointed and plan and project estimate are being finalised. In respect of West Bengal, tenders have been finalized for both the projects and works will be commenced shortly.

XII HRD programmes

NFDB has supported various State Fisheries Departments in conducting training programs under various aspects of the NFDB schemes. No. of extension programs have been taken up successfully up NFDB at the level of fish farmers, fishermen cooperatives, field functionaries and Senior Officers of various State Departments of Fisheries / UT governments to impart training in the aspects of transfer of technology under various schemes of NFDB, in new dimensions in extension management and to enhance the skills of the functionaries of State Fisheries Departments towards the Training Needs Assessment (TNA) to identify the gaps in fisheries and development of fisheries through State fisheries Departments, FISHCOPFED, ICAR and Central Institutes, Universities, College of Fisheries, Krishi Vigyan Kendras, NGOs, National Institute of Agricultural Extension Management (MANAGE), Hyderabad and Administrative Staff College of India (ASCI), Hyderabad. The details are given below:

i. Training to fish farmers/entrepreneurs and fishermen co-operatives: NFDB has extended financial assistance of Rs. 17.25 crore towards training under different schemes of NFDB to 91065 members in the aspects of intensive aquaculture in ponds and tanks, hatchery management, integrated fish farming, scampi culture, cage and pen culture, reservoir management, good management practices in coastal aquaculture, ornamental fisheries, hygienic handling of fish etc.

ii. Training to field functionaries at MANAGE, Hyderabad: NFDB in collaboration with MANAGE implemented training programs for the field functionaries and Senior Officers of various State Departments of Fisheries / UT governments. So far 185 State Fisheries Officers have been successfully trained in new dimensions in extension management.

iii. Training to senior officers of Department of Fisheries at ASCI, Hyderabad : In order to improve the managerial capabilities of senior level fisheries officials in the State Fisheries Depts., NFDB has provided a Management Development programme in the Academic Staff College of India, Hyderabad and trained 25 officers.

iv. Training in cage and pen culture: NFDB in association with Maharashtra Fisheries Development Corporation has organized training of trainers program on pen and cage rearing of seed in Erai reservoir, Chandrapur, Maharashtra from 1.06.2009 to 03.06.2009. 22 state fisheries officials have taken up this program.

v. Proposed Action Plan for Capacity Building: Training programs under different activities of NFDB to fishers and fish farmers, trainers training to fisheries officers, Exposure visits within the country and outside the country to fisheries officers, entrepreneurs, fishers and farmers and International Expo's, conferences, seminars and workshops by NFDB, DADF and Other Government organizations have been planned to take up at various institutions of national significance such as National Institute of Rural Development (NIRD), National Institute of Agriculture Extension Management (MANAGE), Administrative Staff College of India (ASCI), Indian Council of Agriculture Research (ICAR) institutions, National Institute of Post Harvest Training and Technology (NIFPHATT), Fisheries Survey of India (FSI), National Institute for Micro Small and

Medium Enterprises (NIMSME) and Fisheries colleges with a budget outlay of 10.72 crores.

XIII Revision of EFC document

To make the schemes of NFDB acceptable to the user governments /government organizations/entrepreneurs/ farmers and fishermen the guidelines and the pattern of financial assistance was modified upon suggestions of Governing Body of NFDB and approved in the 13th Executive Committee meeting of NFDB. Government of India has approved the broad approach of assistance pattern suggested by the 13th Executive committee Dt. 17.04.2009 for NFDB schemes and directed to formulate detailed guidelines for implementation of the various schemes. Detailed guidelines for the approved schemes are under preparation.

XIV State Specific Action Plans

For comprehensive development of fisheries in the states, regions wise meetings were conducted to arrive at the state specific action plans for the year 2009-10. Approval of schemes worth Rs. 168. crore was communicated to all states with a request to send detailed proposals. Regional wise meeting are being planned to enlighten the revised schemes of NFDB and to obtain the proposals accordingly.

XV Meetings and Workshops organized

NFDB is networking with several institutions/organizations dealing with fisheries with a view to integrate the efforts made by various institutions and to take the results of research to the door steps of farmers. Keeping this in view a number of consultations have been made with state fisheries departments, research organizations, Co-operative organizations and stakeholders. The subjects discussed include reservoir management on scientific lines, development of domestic marketing, prioritizing need based research and murrel seed production in inland waters.

XVI Monitoring and Evaluation

i. National Institute of Rural Development: NFDB has entered into a MoU with the National Institute of Rural Development (NIRD), Hyderabad to know the impact of the training programmes conducted through different institutes such as state governments (Fisheries Departments), Fishermen Federations/Corporations, Fisheries Institutes under ICAR, KVKs, College of Fisheries, NGOs to whom NFDB provided financial assistance for the development of “Intensive Aquaculture in ponds and tanks, Reservoir Fisheries Development, Coastal Aquaculture, Seaweed cultivation and Fish processing. The evaluation report is to be submitted shortly.

XVII Publicity / Participation by NFDB through Exhibitions /Seminars / Workshops/ Advertisement

NFDB has participated in various exhibitions, fish festivals, trade fairs and seminars with a view to familiarize the stakeholders about the objectives and guidelines of NFDB. It has so far participated 15 such occasions covering 12 states.

XVIII Indian Fish Festival – 2009 (INFISH-2009)

III Governing Body of NFDB has suggested to conduct atleast 4 fish festivals throughout the country. Accordingly, NFDB with Department of Fisheries, Government of Andhra Pradesh, have jointly organized “Indian Fish Festival – 2009 at Peoples Plaza, Necklace Road, Hyderabad from 11th to 13th July 2009. The second festival is being planned at Delhi. Government of India has created 27 posts in NFDB . Out of 27 posts, 23 posts were filled up. There is a need of specialists / experienced personnel to handle the issues of post harvest, processing HACCP, value addition, research, evaluation and monitoring, engineering and socio-economic aspects. Therefore Government of India was requested to provide additional staff of 28 posts which was agreed to in EFC meeting as the sanctioned staff of NFDB is too small to deliver functions of huge magnitude effectively to achieve the objectives of the Board.

7. Veterinary Council of India

Veterinary Council of India is a Corporate Body under the Indian Veterinary Council Act, 1984. While 100% grants-in-aid is provided for establishment and running of the Veterinary Councils of Union Territories, grants-in-aid provided to states is on 50:50 basis between Centre and States for this purpose. At present, the act is implemented in all States and UTs except Jammu & Kashmir. In accordance with the provisions under section 3(3) (g) of the Indian Veterinary Council Act, 1984, Government of India is conducting the triennial election to VCI in November, 2009.

8. Preparedness, Control and Containment of Avian Influenza

8.1 The outbreak of Avian Influenza (AI)

The first outbreak of Avian Influenza (H5N1) in poultry in India was reported in February, 2006 and subsequently during 2007 and 2008. The details of the outbreaks are as follows:

First outbreak - Navapur, Uchchal (18.02.06)

Second outbreak - Jalgaon (Maharashtra) and Burhanpur (Madhya Pradesh)

- (a) Phase I- 14.03.06
- (b) Phase II - 28.03.06
- (c) Phase III - 04/05.04.06
- (d) Phase IV - 18.04.06

Third outbreak - Chingmeirong, East Imphal District, Manipur (25.07.2007)

Fourth outbreak in 68 epicentres in 15 districts of West Bengal and 3 epicentres in two districts of Tripura (15.01.2008 to 16.05.2008).

Fifth outbreak in 18 epicentres in 9 districts of Assam , 11 epicentres in 5 districts of West Bengal and 1 epicentre in South districts of Sikkim (27.11.2008 to 27/5/2009).

The last outbreak of Avian Influenza in India was reported on 27th November, 2008 in Kamrup district of Assam. The disease spread to 8 more districts of the State. Outbreak of Avian Influenza was also reported in 5 districts of West Bengal and one district Sikkim. The last incidence of Avian Influenza was notified on 27th May, 2009, after which there has been no further outbreak. After completion of control and containment operations, India declared freedom from Avian Influenza on 22nd October, 2009.

A programme on ‘**Preparedness, Control and Containment of Avian Influenza**’ under the Central Sector Scheme ‘Directorate of Animal Health’ is being implemented by the Department during the Eleventh Plan. The objectives are as under:

- Minimize the threat posed in India by AI to animals and humans.
- Facilitate control of disease at source i.e. the animal.
- Prepare for control and response to an AI pandemic.
- Reduce morbidity, mortality and social disruption.
- Strengthen Disease surveillance by achieving sustained national coverage.
- Develop efficient disease surveillance and diagnosis systems e.g. GIS.
- Establish Networking amongst diagnostic laboratories, Quarantine Stations & AI cell of the Department.
- Improve facilities for sample collection, transportation and cold-chain maintenance.
- Establish a dedicated Disease Surveillance cell at the level of Government of India.
- Improve and enhance diagnostic capacity; reduce lead time for availability of diagnostic results.
- Increase outbreak investigation capacity.
- Involve community in surveillance.
- Sensitize industry stakeholders.
- Generate public awareness resulting in educated citizenry.
- Training of human resource for surveillance and to control and contain an AI outbreak.
- Develop and procure emergency supplies of equipment, vaccines etc. and ensure availability at strategic locations in the field.

A global alert has been sounded on AI and possibility of the outbreak of a human pandemic. As per the WHO the immediate shock of AI will be larger than the Severe Acute Respiratory Syndrome (SARS) outbreak causing sickness, death, disruption of economic process etc. WHO has notified that the world is closer to a pandemic than since 1999 as all the pre-requisites have been achieved except successful human-to-human transmission, therefore, capacity building, supporting an outbreak containment plan and creation of avian influenza cell has been initiated.

8.2 Action taken for prevention and control of Avian Influenza:

- (i) A clear and focused National Strategy for preparedness, control and containment has been formulated. The immediate priority is to minimize the public health risk by containing AI at source i.e. animal by halting further spread of epidemics in poultry populations. Based on the experience of handling control and containment operations during outbreaks in India, the Action Plan has been revised, updated and elaborated. The Action Plan was finalized in November 2006 and circulated to States/UTs Governments & concerned organizations of the Government of India. The Department has circulated the 'Checklist for Preparedness, Control & Containment of Avian Influenza' as also the 'Immediate Points to be Handled if Outbreak is Confirmed' as ready reckoners to facilitate review and preparedness at level of State Governments. The Action Plan is being revised on the basis of the experience gained in the control and containment operations during the last occurrence of the disease which involved poultry in backyard sector.

- (ii) The Government has a policy to compensate poultry farmers for the poultry culled in control operations. India is one of the few outbreak countries in the world where compensation is paid immediately. This has been internationally recognized and appreciated. The rates of compensation for birds culled and feed destroyed has been revised with effect from 7th February 2008. The rate for layer bird has been revised from Rs.40 per bird to Rs.50 per bird and for broiler from Rs.30 to Rs.40 per bird. Earlier, no separate rate was prescribed for Japanese Quail, Duck, Geese, Guinea Fowl, Turkey and Eggs.
- (iii) In view of the outbreak in the neighboring countries, the following measures have been taken:
 - (a) Ban on import of poultry and poultry products.
 - (b) Border States to Bangladesh, Pakistan and Myanmar have been alerted.
 - (c) States have been advised to increase surveillance especially around water bodies, advise farmers to keep poultry indoors, prevent intermingling of poultry with other species and report unusual mortality immediately.
 - iv) Nationwide surveillance is continuing. Testing of serum samples has been started at regional level laboratories at Bangalore, Guwahati, Kolkata, Pune and Jalandhar in addition to High Security Animal Disease Laboratory (HSADL), Bhopal.
 - v) The preparedness of the States is being continually assessed and monitored by the Government of India (GOI) through National Conferences of Animal Husbandry secretaries, regular touring by GOI officers, and weekly reports on unusual mortality from States.
 - vi) Joint mechanism between key stakeholder Departments of GOI especially Animal Husbandry and MOHFW have been operationalised at various levels and are working successfully. The Inter-Ministerial Task Force is reviewing the situation regularly. The Joint Monitoring Group is meeting frequently to review and decide on technical matters. The Committee of Secretaries (COS) headed by the Cabinet Secretary periodically reviews the situation.
 - (vii) Reserve of essential material for control operations have been developed and are being expanded further.
 - (viii) The training of veterinary personnel in Preparedness, Control and containment is continuing. GOI has trained veterinary manpower to handle control and containment operations, which is about 82% of the total workforce in the country.
 - (ix) HSADL has been recognized as World Animal Health Organization (OIE) reference laboratory
 - (x) Campaigns have been launched at National level through the mass media like TV, Radio and Newspapers for risk communication. Posters, flyers, community leader letters, leaflets, hoardings etc are used as communication tools. During the recent outbreak in West Bengal, sensitization programme for creating awareness have also been launched.

9. Livestock Insurance

The Livestock Insurance Scheme being implemented in all the States except Goa, has twin objectives of providing protection mechanism to the farmers and cattle rearers

against any eventual loss of their animals due to death and to demonstrate the benefit of the insurance of livestock to the people & popularize it with the ultimate goal of attaining qualitative improvement in livestock and their products.

The Scheme was implemented on a pilot basis during the year 2005-06 and 2006-07 in 100 selected districts across the country. For the year 2007-08, the scheme continued in the same format in the same 100 districts. A full fledged scheme on Livestock Insurance, which was approved on 20.11.2008, is being implemented in 100 newly selected districts on regular basis. In order to assess the impact of implementation of scheme during the years 2005-06 to 2007-08 in terms of achieving the objective of the scheme and to identify the weaknesses affecting it, an Evaluation Study was given to Institute of Rural Management, Anand, a pioneer institute in rural management. Based on the findings and suggestions of the evaluation study, it has been decided to extend the scheme in 300 districts including the 100 districts in which the scheme is being implemented from 2008-09 onwards and the 100 districts in which the scheme was implemented during the pilot run during 2005-06 to 2007-08. Besides, the indigenous cattle will also be under the purview of the scheme.

Under the scheme, 12.83 lakh animals were insured upto 2008-09. The total expenditure during the same period was Rs. 5979.67 lakh. There is a provision of Rs. 30.00 crore for the year 2009-10.

10. Special Livestock and Fisheries Sector Package for 31 Suicide Prone Districts of Karnataka, Kerala, Andhra Pradesh and Maharashtra

A 'Special Package for Livestock and Fisheries Sectors for 31 Suicide-prone Districts' in the states of Andhra Pradesh, Maharashtra, Karnataka and Kerala involving an investment of Rs.698 crores comprising of a budgetary support of Rs.510.79 crore and credit component of Rs.187.21 crore, to be implemented over a period of three years from 2006-07 was notified on 30.08.2006. The scheme has following components:

- (i) Induction of high yielding milch animals: It provides for induction of 1000 high yielding milch animals per district per year on a 50% subsidy. Each identified beneficiary is provided with two animals on the basis of an average cost of Rs.30,000 per animal (including shed).
- (ii) Calf rearing programme: Induction of 1000 high yielding milch animals per district per year for three years will also result in induction of 500 female calves per district in each of these years. The package provides for 50% subsidy on the rearing cost of the calf animals (estimated at Rs.40 per animal per day).
- (iii) Providing cattle / buffalo breeding services: It was decided to extend cattle/buffalo breeding services under the National Project for Cattle & Buffalo Breeding (NPCBB), free of cost, to all the breedable cattle and buffaloes @ Rs.450 per animal in the 31 districts. Further, it was also decided to cover 70% of the breedable animals by oestrus synchronization at an expenditure of Rs.500 per animal.
- (iv) Provision of health care to dairy animals: The package provides for health care services in respect of animals inducted for a period of one year @ Rs.300 per animal.
- (v) Establishment of milk chilling units: The special package envisages establishment of 50 chilling centres at a cost of Rs.12.00 crore over a period of three years.

- (vi) Feed and fodder supply programme: The high yielding milch animals (average milk production - 10Kg./day) need about 14 to 15 Kgs. of balanced feed and fodder per day, which can be processed and compressed into a block. For feeding of such blocks, 25% expenditure involved for a year for each batch of induction is provided as subsidy by the Central Govt.
- (vii) Establishment of fodder block making units: It was decided to establish 20 fodder block making units in the affected districts @Rs.85 lakh per unit at 50% subsidy.
- (viii) Fisheries Programme: It was decided to provide farmers in the 31 districts with an opportunity for supplementary income through fisheries by development/creation of water bodies in 100 ha. area at a subsidy of 45% in each of these 31 districts.

On the basis of operational experience, the beneficiary states proposed certain amendments to the special package, which were examined and the following modifications were approved by CCEA in August, 2007:

- (i) The average estimated cost for estrus synchronisation comes to Rs.650 per animal against an amount of Rs.500 per animal provided for the same in the special package. The additional amount required for oestrus synchronization may be permitted from the amount available for artificial insemination.
- (ii) Establishing 100 mini feed mixing plants in place of fodder block making units.
- (iii) Induction of additional cattle by utilizing savings.
- (iv) Provision of feed concentrate as an option for fodder blocks.
- (v) Providing mineral mixture, de-worming, urea molasses block as a substitute for estrus synchronization.
- (vi) Utilising the savings from providing AI coverage for supply of mineral mixture and kits for detection, prevention and control of mastitis.

The beneficiary States submitted proposal for further modification of the scheme, which were examined and submitted to Cabinet for approval. As per the direction of Cabinet, an Empowered Committee (EC) headed by Secretary, Department of Animal Husbandry, Dairying & Fisheries with the representatives from Department of Agriculture & Cooperation, Planning Commission and Ministry of Finance was constituted. The EC approved the following modifications in its meeting held on 23rd October, 2008:

- (i) Conducting Fertility Camps to bring larger number of animals into reproductive fold. The funds available under the breeding services component may be utilized for the purpose.
- (ii) The Pregnant Animal Feeding Programme involving provision of nutritional support to animals in the later stages of pregnancy from sixth month onwards by giving one kg. of cattle feed per day. Further, one dose of antihelminthic during third trimester of pregnancy and one dose during the first week will be supplied after parturition to improve the milk production capacity of the animal. The funds available under the breeding services component may be utilized for the purpose.
- (iii) Goatery, piggery and poultry rearing can be taken up in case induction of milch animals is not prevalent in the area or not acceptable to the beneficiary.

- (iv) Pen and Cage culture under fisheries will be adopted at the rate of subsidy applicable to the existing component.
- (v) The activity of renovation and repair of ponds is permissible under the special package.
- (vi) Additional number of animals inducted can be covered under the provision of health cover for a period of one year, without involving any extra financial implication.
- (vii) Re-appropriation of funds from the component of 'Fodder Block Making Units' to other activities or for up-gradation of existing cattle feed plants, is allowed provided the feed produced in such cattle feed plants is supplied to the animals inducted under the Special Package at a subsidized rate.
- (viii) Beneficiary could use the entire subsidy amount of Rs.30,000/- for purchase of two milch animals, without making any investment on the animal shed, if he already has the required shed.
- (ix) The proposal of the Govt. of Andhra Pradesh for increasing the permissible cost of Oestrus Synchronization from Rs.650/- to Rs.750/- for Protocol-I and Rs.800 for Protocol-II is approved.
- (x) In another meeting of the Empowered Committee held on 17/12/2008 one more component, namely, 'Sheep farming' was included in the package.

11. New Schemes proposed for the Eleventh Plan

The following new schemes are being formulated by this Department in the Eleventh Plan period:

(i) **Poultry Development:** This scheme has three components, namely, Assistance to State Poultry/ Duck Farms, Rural Backyard Poultry Development, Establishment of Poultry Estates. Out of these three components, following two are the new components:

- (a) Rural Backyard Poultry Development
- (b) Establishment of Poultry Estates

Comments of the appraisal agencies on the EFC memo have been received. The action is being initiated to hold EFC meeting for this scheme.

(ii) **Establishment/ Modernization of Rural Slaughter Houses including Mobile Slaughter Plants:** In order to meet the target of 10% increase in meat availability during 11th Five Year Plan, more slaughter houses need to be established and the existing ones need to be modernized. With this objective, the scheme is being implemented in three states, namely, UP, Andhra Pradesh, Meghalaya on pilot basis.

(iii) **Integrated Development of Small Ruminants:** The scheme has been approved and administrative approval issued. On the request of NABARD who is the implementing agency, it is proposed to change the interest free loan component and introduce capital subsidy component. A revised proposal has been circulated to the appraisal agencies.

(iv) **Piggery Development:** Piggery holds great potential for commercial production in the country. However, these species have not received due attention either for promotion of their rearing by the farmers or their commercial exploitation through entrepreneurial programmes. The scheme has been formulated with the objective of promoting entrepreneurship in districts having potential and also providing the required support to farmers to take up the pig rearing. The draft EFC memo of the scheme has been circulated to the appraisal agencies to furnish their comments.

(v) **Salvaging and Rearing of Male Buffalo Calves:** In India, an average of 8 million male buffalo calves are removed from the production system due to intentional killing by farmers. These calves could otherwise be salvaged for meat production, recovery of hides and other by-products. Availability of such an avenue for gain will improve the economic condition of the farmers and also provide quality meat for domestic consumption and export and raw material base for leather sector. The scheme has been formulated to address these issues. The EFC memo is under circulation to the appraisal agencies.

(vi) **Poultry Venture Capital Fund:** This scheme has been formulated to encourage new species of birds and low input technology for poultry farming among rural farmers. Comments of the appraisal agencies on the EFC memo have been received. The action is being initiated to hold EFC meeting for this scheme.

(vii) **Food safety and traceability:** Food safety is now universally recognized as a public health priority. It requires a global approach, from production to consumption, which is so aptly conveyed by the expressions 'from the stable to the table' and 'from the field to the plate'. As far as products of animal origin are concerned, this inevitably means controlling the health status of the animals from which these food products are derived. The possibility of the animals having ingested and possibly accumulated chemical (drug residues, pesticides, heavy metals, etc.) or physical contaminants (radioactive elements, foreign bodies, etc.) during their lifetime needs to be evaluated. Also biological agents (bacteria, viruses, prions, parasites, antibiotics, promoters, phytotoxins or mould toxins), chemical agents (farm chemicals [pesticides], dioxins, heavy metals, environmental contaminants, etc.) or physical agents (foreign bodies, etc.) may be present in animal feed and, consequently, in animal products (milk, meat, fish, egg products, etc.). Risks may also result from an overdosage of certain components, notably medication, in animal feed. Any such biological, chemical and physical agents present in the body of the live animal may contaminate animal products (milk, meat, fish, eggs, etc.) at levels that are unacceptable in terms of public health. Controlling the safety of food of animal origin at the primary production stage therefore involves all those measures necessary to prevent these contaminants from entering animal products, or, if they do, that their levels do not exceed the maximum permissible levels. Hence, there is a need to train the primary producers i.e. the farmers and breeders and to evolve guidelines to protect animals from contamination. In order to achieve desired level of food safety, a scheme 'Food Safety and Traceability' under Central Sector Scheme is being formulated.

(viii) **Utilization of Fallen Animals:** An estimated 40 million animals die every year in the country due to natural causes, disease and other adversities. The average rate of mortality in cattle and buffaloes is 7.5% and 9.6 %, respectively. The recovery of hides, skins and other byproducts from fallen animals is very low due to non-availability of necessary infrastructure. As per a study carried out by the Central Leather Research Institute (CLRI), the estimated loss suffered by the country due to non-recovery of hides and skins is to the tune of Rs.990 crores per annum. These fallen animals are also a cause of serious environmental pollution. Accordingly, it is proposed to implement a scheme for utilization of fallen carcasses. The EFC memo is under circulation to appraisal agencies for their suggestions/comments.
