

MARKETING NEWS

Aqua Aquaria India – 2011 – A Report

MPEDA organized the first edition of AQUA AQUARIA INDIA 2011 – one of the largest aquaculture and aquarium show in Asia – from 6 – 8, February 2011 at Chennai Trade Centre, Chennai, Tamil Nadu. Hitherto MPEDA had been organizing the aqua and aquaria shows separately, viz. INDAQUA – a biennial event and INDAQUARIA – an yearly event. For the first time, this year, both the events INDAQUA and INDAQUARIA have been clubbed together as AQUA AQUARIA 2011.

The 3-day event comprised technical sessions conducted by International aquaculture/ornamental fish experts, exhibition by farm associations/clubs/societies/entrepreneurs, hatcheries, input suppliers, feed mills, processing plants, quality control laboratories, and service providers exhibiting aquaculture/aquariculture accessories, ancillary equipments, machinery, products, inputs, ingredients and additives. A buyer-seller meet also was arranged which was attended by aquaculture and aquariculture (Ornamental fish culture) experts and importers/exporters. Most of the Aquaculture and ornamental fish breeders/farmers, feed manufacturers, hatchery owners, machinery suppliers, exporters/importers, officials from fisheries institutions and State/Central Govt. Departments, researchers, students and aquarium hobbyists in India/abroad participated in the technical sessions, exhibition and buyer-seller meet. Experts and importers from India, USA, Germany, Netherlands, Australia, U.K, Israel, Mexico, Philippines and Japan, amongst others had also attended the event.

The Programme

Prof. K.V. Thomas, Hon'ble Minister of State for Consumer Affairs, Food and Public Distribution inaugurated the event on 6th February 2011. Ms. Leena Nair, IAS, Chairman, MPEDA welcomed the gathering. Felicitations were offered by Dr. Damodar Rout, Hon'ble Minister for Agriculture Co-operation, Fisheries and Animal Resources Development,

Govt. of Orissa, Dr. Justice A.K. Rajan, Chairman, Coastal Aquaculture Authority, Shri. Shripad Bhale Rao, IAS, Special Chief Secretary, Andhra Pradesh, Dr. P. Krishnaiah, IAS, Chief Executive, NFDB, Smt. M.P. Nirmala, IAS, Secretary (Fisheries), Tamil Nadu and Dr. S.K. Saxena, Director, EIC. Shri. N. Ramesh, ITS, Director (Marketing), MPEDA proposed vote of thanks.



Prof. K.V. Thomas, Hon'ble Minister of State for Consumer Affairs, Food & Public Distribution inaugurates AAI-2011 by lighting the ceremonial lamp.



Welcome address by Ms. Leena Nair, IAS, Chairman, MPEDA



Presidential address by Prof. K.V. Thomas, Hon'ble Minister of State for Consumer Affairs, Food & Public Distribution, Government of India.



A view of the audience



Shri. N. Ramesh, ITS, Director (Marketing), MPEDA proposes vote of thanks

Delivering the presidential address Prof. Thomas said, "Though fisheries is a State subject, the multiplicity of organisations under various Ministries in the Central Government at times fails to have a focussed attention in the national interest. This needs to be addressed by forming a separate Ministry." The need of the hour was to have a separate Ministry for handling fisheries at the national level to provide focussed attention to that sector, he said and added that though fisheries formed part of the agriculture department, many of the concessions given to the agriculture sector had not been passed on to the fisheries sector for several years and the Centre was taking steps to rectify the situation.

Later releasing the Ornamental Fish Directory, the Minister said that greater R&D support with strong linkages between R&D agencies, increased investment in fish and shrimp hatcheries, diversified aquaculture species, establishment of aquaculture estates, feed mills and ancillary industries have been identified as important areas for maintaining the pace.

In her welcome address, Ms. Leena Nair said, "The estimated production of cultured ornamental fish in the country is minuscule. However, there is huge potential. Currently most of India's ornamental fish production is used for domestic sales. A large quantity of captured ornamental fish is being exported. In order to promote the sector as well as to preserve our environmental heritage, MPEDA is providing technical inputs and organising the sector with collaboration for funding with National Fisheries Development Board (NFDB)." Ms. Nair said that with the introduction of *Litopenaeus vannamei* shrimp culture in the country, the cultured shrimp production was poised to reach new heights.

During the inaugural function, the 'Guidelines for Green Certification of

FELICITATION ADDRESSES

Dr. Damodar Rout, Hon'ble Minister for Agriculture, Co-op & Fisheries, Government of Orissa.



Dr. Justice A.K. Rajan, Chairman, CAA



Shri. Shripad Bhale Rao, IAS, Special Chief Secretary, Government of Andhra Pradesh



Dr. P. Krishnaiah, IAS, Chief Executive, NFDB, Hyderabad



Smt. M.P. Nirmala, IAS, Secretary (Fisheries), Government of Tamil Nadu



Dr. S.K. Saxena, Director, EIC, New Delhi

Freshwater Ornamental Fishes' was released by Prof. K.V. Thomas and Dr. Damodar Rout released the Ornamental Fish Breeders/Traders Directory. Export awards for

outstanding export performance in various categories of fish and fish products for the year 2009-10 were also distributed during the inaugural function.

The exhibition of Aquaculture, ornamental fishes and related accessories was also inaugurated by Prof. K.V. Thomas, Hon'ble Minister of State for Consumer Affairs, Food and Public Distribution.



Release of Ornamental Fish Breeders / Traders Directory



Release of Guidelines for Green Certification of F/W Ornamental Fishes



Dr. E.G. Silas, Chairman, Task Force Committee on Green Certification Guidelines (Right) being honoured

TECHNICAL SESSIONS

The technical sessions were conducted on 6th and 7th February 2011 separately for aquaculture and aquariculture (Ornamental fish) sectors. It was attended by 1370 delegates of which 1220 were farmers mainly from Kerala, Karnataka, Tamil Nadu, West Bengal, Maharashtra, Goa, Andhra Pradesh etc.

A) Technical Sessions (Aquaculture)



Dr. P. Krishnaiah IAS, CE, NFDB (Centre) chairing the Technical Session - I

The first technical session on aquaculture held on the afternoon of 6-2-2011 focused on the status and prospects of Shrimp and Scampi culture. This session was chaired by Dr. P Krishnaiah IAS, Chief Executive, NFDB, Hyderabad. In his introductory address Dr. Krishnaiah highlighted the importance of making shrimp aquaculture responsible and sustainable and impressed the need for cooperation among all stakeholders. In this session there were three technical presentations.

Dr. Steve Arce of the Oceanic Institute, Hawaii, USA, presented the 1st paper entitled “SPF L. vannamei shrimp brood stock development and biosecurity principles for sustainable production”. In this presentation Dr. Arce dwelt on the economic impact of disease in shrimp culture; the benefits of “Clean Shrimp Stocks and, in this context, the importance of development of Specific Pathogen Free (SPF) shrimp stocks. He explained the methodology of development of SPF shrimps; the need for biosecurity; the key principles of

pathogen exclusions; the risks of on-farm Disease Triggers and Farm strategies for controlling viral diseases.



Dr. Steve Arce, Oceanic Institute, USA

The 2nd paper of the session was presented by Dr. Mohandas of C P Aquaculture (India) Ltd., on “Hatchery operation and farming of L. vannamei with special reference to India”. In his presentation Dr. Mohan Das explained the status of L.vannamei culture in India, with reference to the production levels achieved by various farmers. He also dwelt on the various measures to ensure sustainability of L. vannamei culture.



Dr. Mohandas, CP Aquaculture (India) Ltd.

“Global Status, Challenges and perspectives of the Shrimp Industry” was the title of the 3rd presentation by Dr. Darryl E. Jory, Editor, Global Aquaculture Advocate magazine, USA. Dr. Jory gave detailed account of the production status of shrimp, detailing the contribution of various regions; L.vannamei gaining prominence as the most important species commercially by accounting for about 36 % of total production etc. He also dwelt on the key challenges faced by the shrimp culture; international prices being the most important of these and diseases being

the second important challenge. While acknowledging the importance of L. vannamei, Dr. Jory also advised not to abandon other species as there is room for more than one species in international markets. In his presentation Dr. Jory stressed that shrimp industry need to improve its efficiency and more responsible and sustainable. He also suggested various mechanisms by which these objectives could be achieved.



Dr. Darryl E. Jory, USA

The 2nd Technical session on Aquaculture was held on the forenoon of 7-2-2011. The Title of the session was ‘Diversified aquaculture and aquaculture feed production’ and the session was chaired by Dr. S.K. Saxena, Director, EIC, New Delhi. In this session there were 5 presentations.



Dr. S.K. Saxena, Director, EIC (3rd from left) chairing the Tech. Session II

Dr. Amir Sagi, Professor & Dean of Faculty of Natural Sciences, Ben Gurion University, Israel, gave a presentation on “Androgenic Gland and Monosex culture: Early Sex Reversal Projects and Recent Discoveries of the insulin like AG Hormone and molecular sex markers”. In this presentation, Dr. Amir Sagi explained the process involved in selection, methodology



Dr. Amir Sagi, Israel

adopted for generating Neo-females and development of all-male progeny in Scampi.

Dr. Emilia Qunitio, an expert on Mud Crab from the SEAFDEC, Philippines presented her experience in culture of Mud crab in Mangroves in Philippines. In her presentation she also highlighted the eco-friendly as well as Mangrove-friendly nature of mud crab culture.



Dr. Emilia Qunitio, Philippines

Third presentation of the day was by Dr. Jens Kahle of WAB Trading International GmbH, Germany. Its title was “Potential for Cluster Organic Shrimp Farming in India”. Dr. Kahle gave an introduction of EU Organic farming regulations including the standards for feed, seed & farming practices, small holder certification standards, IFOAM regulations, Internal Control Systems and needs,



Dr. Jens Kahle, Germany

general structure and operation of Organic farming. Besides he also presented the potential for small holder Organic Cluster farming in India.

Dr. Vijay Anand, Technical Director of the International Marketing wing of the American Soyabean Association, New Delhi presented a paper on the “Status of the Indian Feed Industry and Future Trends”. In his presentation, Dr. Vijay Anand dwelt on the kinds and number of feed mills in India, the quantum of feed produced and sold for fish culture and shrimp culture and various issues involved in sourcing of raw material, storage and sale of feed.



Dr. Vijay Anand, Technical Director, International Marketing, India

The last presentation in aquaculture of the day was by Shri S. Vijaya Kumar, Project Manager, RGCA, India. Shri Vijayakumar presented the details of the project of RGCA on GIFT Tilapia being implemented with the collaboration of World Fish Centre.



Shri. S. Vijayakumar, MPEDA-RGCA, India

B) Technical Sessions (Ornamental Fish)

There were two technical sessions on Ornamental Fish organized on 6th

(Day 1) and 7th (Day 2) February 2011. The session on Day 1 was chaired by Sri. G. Mohan Kumar, IAS, Addl. Secretary, Ministry of Water Resources, Govt. of India, New Delhi and Dr. A Ramachandran, Professor, Cochin University of Science and Technology (CUSAT) chaired the session on Day 2.



Shri. G. Mohankumar, IAS, Additional Secretary, GOI (2nd from left) chairing the Technical Session - I

The session- I started with the presentation by Dr. A. Ramachandran, Professor, School of Industrial Fisheries, Cochin University of Science & Technology on the topic “Green Certification of Ornamental Fishes - an initiative in India”. He gave an overview of the standards and guidelines proposed by the National Task Force constituted by MPEDA to Green Certify the supply chain of fresh water ornamental fish trade and its importance as well as scope & potential.



Dr. A. Ramachandran, CUSAT, Kochi

The 2nd speaker was Dr. Alex Ploeg, Secretary General- Ornamental Fish International, The Netherlands and the topic was “An update on the Global Ornamental Fish Trade regulations & Import requirements of

Major Markets”. He explained the different legislations at local, national and international levels. He had also stressed the importance of proper education in all segments of the industry on fish health, animal welfare, biosecurity, invasive species, etc.



Dr. Alex Ploeg, OFI, The Netherlands

The 3rd and last presentation was by Mr. Joseph Itzkovich, Israel on the topic “EU market for ornamental fish - Demand, Trends and Quality requirements”. Since European Union (EU) is one of the largest markets for ornamental fish in the world, the particular topic was very much relevant for the farmers as well as exporters. He stressed the need for healthy and high quality fish due to increased awareness about fish disease and quality among customers. He also explained the quality criteria for export to EU.



Mr. Joseph Itzkovich, Israel

The second session (day 2) started with a presentation by Dr. Nuno Simoes, Mexico on the topic “Collection and breeding of marine crustaceans and Sea anemones” which was a totally new area for the Indian farmers. He focused on the biology of marine ornamental shrimp and sea anemones as well as on the fisheries

and culture. He also addressed the role of crustaceans on the aquatic ornamental industry as food and parasites, the potential for developing new freshwater shrimp varieties for the Nano Aquaria and some data on the freshwater astacidae and the marine stomatopods as pets.



Dr. Nuno Simoes, Mexico

The 2nd presentation was by Mr. Shane Willis, Australia on “Biosecurity and health management in ornamental Aquatic Industry”. Biosecurity and the potential to transport exotic disease between countries is a growing concern for many governments throughout the world and will result in making it harder to access markets. Mr. Shane explained how the companies can be sustainably biosecured and outlined the biosecurity principles for sustainability of the industry.



Mr. Shane Willis, Australia

The 3rd speaker of the day was Dr. Alex Ploeg, OFI and the topic was “Ornamental fish health in transit - latest and best packing methods for shippers”. The important issues in preparation of consignments for shipment such as the condition of fish, eventual starvation before shipment, packing densities, additions to packing water, eventual use of heat packs or

cool packs, and other related aspects were dealt in detail. He also discussed different packing materials, latest packing methods, international legislation and reception of fish by importers.

The last presentation of the technical session was by Dr. Krishnakumar from Chennai on “Recirculating system for ornamental fish production”. He had explained a cost effective recirculation culture system developed by him for ornamental fishes with special reference to gold fish. He informed that, the system was designed by taking the cost and profit margin as the primary factor and also the production level increased many folds in this system. In this system the culture cycle was 65 - 70 days and mainly gold fishes were cultured because the small and medium sized gold fish are in high demand throughout the year in Indian market.



Dr. Krishnakumar, Chennai, India

These sessions provided excellent opportunity for the farmers to learn about the advancements in technology and practices in both the sectors.

Exhibition

The show also witnessed participation of exhibitors in large numbers. Stalls were put up for exhibition by entrepreneurs from all segments of the aquaculture and ornamental fish industry as well as by Central and State Government Institutions such as NFDB, CIFT, CAA, EIA (Central Govt. Organisations) and MATSYAFED, Orissa Fisheries, TNFDC etc. (State Govt. Organisations). There were stalls exclusively for aquaculture,

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ornamental fish, machinery and equipments, feed, packaging, additives, aquarium accessories, equipments and products wherein the latest trends and technologies were showcased. NETFISH showcased various extension activities of MPEDA through street plays and other visual medias which attracted the attention of many a visitors. Separate demonstration sessions were arranged for school children on the setting up of Aquariums and hundreds of children attended the same.

Ms. D. Sabitha, IAS, IG of Registration, Govt. of Tamil Nadu, distributed the Prizes for the best stalls in Aquaculture and Ornamental Fish sectors on 8th February in the presence of Shri. N. Ramesh, ITS, Director (Marketing), MPEDA.

Buyer Seller Meet

A buyer-seller meet was organised for the Ornamental fish breeders, traders and exporters on 7th February afternoon which provided an exciting platform for the Indian entrepreneurs

to evolve joint ventures and business tie-ups with overseas buyers from U.K. Germany, Netherlands, Israel and Japan.

MPEDA Export Awards

MPEDA Export Awards for Outstanding Performance in exporting marine products were instituted in 1990. The awards are given to two top manufacturer-exporters under categories I to VI (A) and one manufacturer under category VI (B) and VI (C).



Prof. K.V. Thomas, Union Minister inaugurates the exhibition. Ms. Leena Nair, IAS, Chairman, MPEDA (R) and Smt. M.P. Nirmala, IAS, Secretary (Fisheries), Government of Tamil Nadu (L) are also seen



Prof. K.V. Thomas, Union Minister visits stalls alongwith other VIPs including Ms. Leena Nair, IAS, Chairman, MPEDA (Centre)



View of stalls



View of Aquarium Fishes in the exhibition

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- Category I - Manufacturer - exporter with highest export turnover.
- Category II - Product-wise manufacturer exporter with the highest turn over on the major product groups viz., Frozen Shrimp, Frozen Cephalopods, Frozen Finfish, Chilled Marine Products, Dried Marine Products, Molluscs other than cephalopods
- Category III - Exporter of Live Seafoods other than Aquarium fish
- Category IV - Exporter of Aquarium fish
- Category V - Exporter with highest turn over from Deep Sea Fishing
- Category VI - Award for special efforts, taking into consideration of the Achievements made in the following areas.
- (A) Export of value added products
(B) Export of new products
(C) Export to new markets

List of awardees for outstanding export performance during 2009-10 is given below:

CATEGORY	POSITION	AWARDEE
I. (A) Over all Exports	1 st	M/S FALCON MARINE EXPORTS LTD, Bhubaneswar
	2 nd	M/S SILVER SEA FOOD, Porbandar
I. (B) Over all Exports- Quantity wise	1 st	M/S GADRE MARINE EXPORT P. LTD., Ratnagiri
	2 nd	M/S SILVER SEA FOOD, Porbandar
II. Commodity- wise (A) Frozen Shrimp	1 st	M/S FALCON MARINE EXPORTS LTD., Bhubaneswar
	2 nd	M/S DEVI SEA FOODS LTD., Vishakapatnam
(B) Frozen Cephalopods	1 st	M/S SILVER SEA FOOD, Porbandar
	2 nd	M/S AMULYA SEA FOODS, Tuticorin.
(C) Frozen Fin Fish	1 st	M/S KESHODWALA FOODS, Veravel.
	2 nd	M/S SILVER SEA FOOD, Porbandar
(D) Chilled Marine Products	1 st	M/S AQUA WORLD EXPORTS P. LTD, Chennai
	2 nd	M/S BASU INTERNATIONAL, Kolkata
(E) Dried Marine Products	1 st	M/S GLOBAL IMPEX TRADING, Mumbai
	2 nd	M/S NATIONAL SEAFOOD CORPORATION, Mumbai
(F) Molluscs other than Cephalopods	1 st	M/S H.L.MARINE FOOD, Chennai
	2 nd	M/S SAAT AQUAS, Chennai
III. Live Marine Products other than Aquarium Fish	1 st	M/S SULU EXPORTS, Chennai
	2 nd	M/S CRESENT SEA FOOD, Chennai
IV. Aquarium Fish	1 st	M/S TROPICAL FISH AQUARIUM, Bengaluru
	2 nd	M/S. MINIT MEALS, Kolkata
AWARD FOR SPECIAL EFFORTS		
VI. (A) Value added products	1 st	M/S. HINDUSTAN UNILEVER LTD, Mumbai
	2 nd	M/S GADRE MARINE EXPORT P. LTD., Ratnagiri
(B) New Markets		M/S. SEAHATH CANNING COMPANY, Goa
(C) New Products		M/S. ACCELERATED FREEZE DRYING COMPANY LTD, Kochi.

**Prof. K.V. Thomas, Hon'ble Minister of State for Consumer Affairs,
Food & Public Distribution presents MPEDA Export Awards**



Falcon Marine Exports Ltd.



Silver Seafoods



Gadre Marine Exports (P) Ltd.



Devi Seafoods Ltd.



Amulya Seafoods



Aquaworld Exports Ltd.



Basu International



Global Impex



National Seafood Corporation



H.L. Marine Foods



Satt Aquas



Sulu Exports



Tropical Fish Aquarium



Minit Means



Hindustan Unilever Limited



Gadre Marine Export (P) Ltd.



Seahath Canning Company



Accelerated Freeze Drying Company Ltd.

Surge in Marine Products Export During (April - Jan.) 2010-11

Export of Marine Products during April - January 2010-11 have registered a growth of 9.82% in quantity, 20.75% in rupee value and 26.48% in US\$ realisation compared to the same period last year.

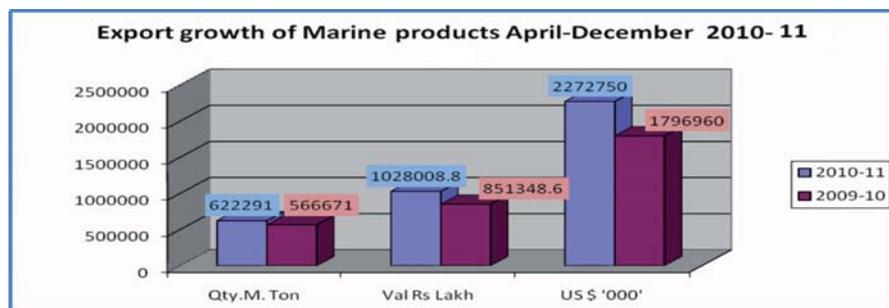
Exports during 2010-11 compared to 2009-10

Export details	April-January 2010-11	April-January 2009-10	Growth %
Quantity Tones	622291	566671	9.82
Value Rs.crore	10280.09	8,513.49	20.75
US\$ Million	2272.75	1,796.96	26.48

Export of Vannamei shrimp had also picked up. India has exported about 8609 MT of Vannamei during this period.

Fish, the principal export item in quantity terms and the second largest export item in value term, accounted for a share of about 37.77% in quantity and 19.26% in US\$ earnings.

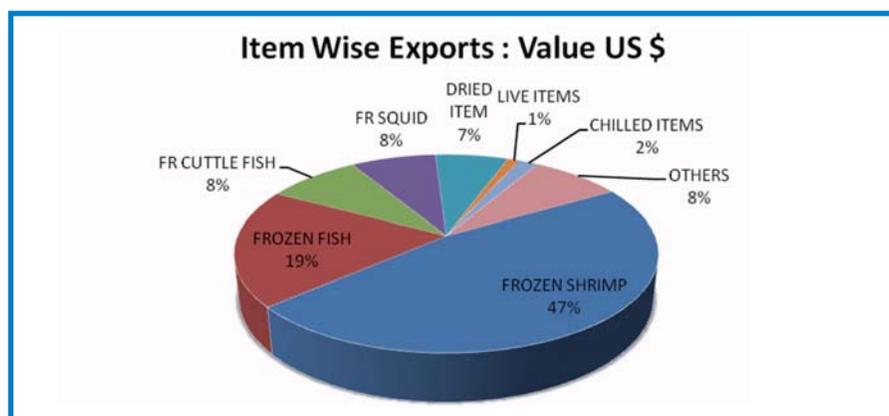
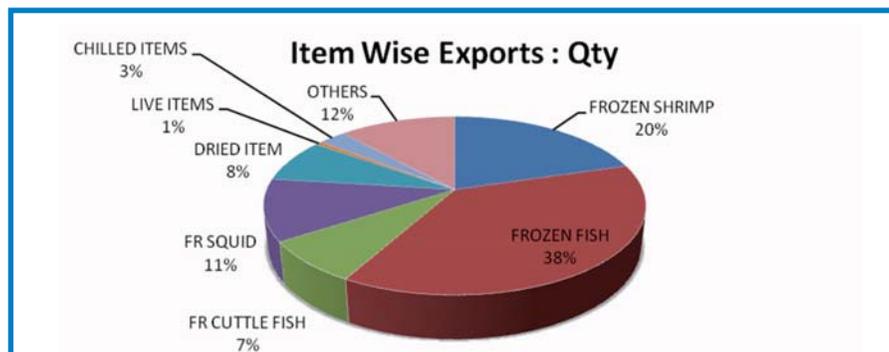
Fr. Squid has a growth of 84.19% in US\$ terms, 57.78% and 75.04% in quantity and rupee value respectively. Fr.Cuttle Fish showed a decline of 16.31% in quantity and showed a growth of 4.97% and 9.97% in rupee value and US\$ realization. There is a considerable increase in the unit value realization (31.40%). Dried items showed growth of 37.92% in quantity but declined 17.18% and 13.09% in rupee and US\$ value respectively compared to same period last year. Item wise details are given in the following table.



There is considerable increase in export of Fr. Shrimp and Fr. Squid during the period. Export of Vannamei and increased landing of Squid mainly attributed for the increase.

Major items of export

Frozen Shrimp continued to be the major export item accounting for 46.92% of the total US \$ earnings. Shrimp exports during the period increased by 13.03%, 34.32% and 40.96% in quantity, rupee value and US\$ value respectively. There is a considerable increase in unit value realization (24.71%) also. Export of Fr. Shrimp to USA has registered a tremendous growth of 85.51% in volume and 143.65% in US\$ terms. Fr. Shrimp export to Japan also showed an increase of 20.89%, 39.74% and 46.81% in volume, rupee value and US\$ value respectively.



Export Compilation for April- 2010 to January- 2011 - Item wise Total

Q: Quantity in Tons, V: Value in Rs.Crore, \$: USD Million

ITEM		Share %	Apr-2010 - Jan-2011	Apr-2009 - Jan-2010	Variation	(%)
FROZEN SHRIMP	Q:	20	126625	112025	14600	13.03
	V:	47.09	4840.9	3604.1	1,236.79	34.32
	\$:	46.92	1066.38	756.5	309.88	40.96
	UV\$:	8.42	8.42	6.75	1.67	24.71
FROZEN FISH	Q:	38	235021	224182	10839	4.83
	V:	19.16	1969.9	1755.81	214.09	12.19
	\$:	19.26	437.67	370.44	67.23	18.15
	UV\$:	1.86	1.86	1.65	0.21	12.7
FR CUTTLE FISH	Q:	8	47675	56968	-9293	-16.31
	V:	8.48	871.42	830.18	41.25	4.97
	\$:	8.48	192.67	175.2	17.47	9.97
	UV\$:	4.04	4.04	3.08	0.97	31.4
FR SQUID	Q:	11	69612	44120	25492	57.78
	V:	7.69	790.53	451.63	338.9	75.04
	\$:	7.69	174.65	94.82	79.83	84.19
	UV\$:	2.51	2.51	2.15	0.36	16.74
DRIED ITEM	Q:	8	49048	35562	13486	37.92
	V:	6.59	676.94	817.41	-140.47	-17.18
	\$:	6.61	150.26	172.9	-22.64	-13.09
	UV\$:	3.06	3.06	4.86	-1.8	-36.99
LIVE ITEMS	Q:	1	4152	4502	-350	-7.77
	V:	1.06	108.62	115.78	-7.15	-6.18
	\$:	1.06	24	24.4	-0.41	-1.66
	UV\$:	5.78	5.78	5.42	0.36	6.63
CHILLED ITEMS	Q:	3	16931	24764	-7834	-31.63
	V:	1.79	184.33	218.59	-34.26	-15.67
	\$:	1.79	40.63	45.82	-5.19	-11.34
	UV\$:	2.4	2.4	1.85	0.55	29.69
OTHERS	Q:	12	73228	64549	8679	13.45
	V:	8.15	837.45	720	117.45	16.31
	\$:	8.21	186.5	156.88	29.62	18.88
	UV\$:	2.55	2.55	2.43	0.12	4.79
TOTAL	Q:	100	622291	566671	55620	9.82
	V:	100	10280.1	8513.49	1,766.60	20.75
	\$:	100	2272.75	1796.96	475.79	26.48
	UV\$:	3.65	3.65	3.17	0.48	15.17

Major export markets



European Union (EU) continued to be the largest market with a share of 26.09% in US \$ realization and 21.20% in quantity. Exports to EU have shown a growth of 11.34% in US\$ realization and 6% in rupee value. However, there is a decline of 3.13% in quantity. USA regained the second place with a share of 16.69%, followed by China 15.02%, Japan 14.27%, South East Asia 15.54%, Middle East 4.91% and Other Countries 7.48%. Exports to USA registered a remarkable growth of 107.64% in US\$ realization and 48.63% in terms of quantity. Increase in export of Fr. Shrimp, and Fr. Squid contributed to the growth. Export to Japan also registered a positive growth of 14.05% in quantity and 40.77% in US\$ term. Export of all items except chilled item showed an increasing trend in Japanese market. South East Asian countries had also registered a positive growth of 39.99% in quantity and 34.80% in US\$ realization. Export to China has declined both in terms of quantity and rupee value. The details are given in the following table.

Export Compilation for April- 2010 to January- 2011

Q: Quantity in ton, V: Value in Rs. Crores, \$:USD Million

Country		Share %	Apr-2010 - Jan-2011	Apr-2009 - Jan-2010	Variation	(%)
JAPAN	Q:	9	56299	49364	6935	14.05
	V:	14.25	1465	1,069.69	395.63	36.99
	\$:	14.27	324	230.45	93.96	40.77
USA	Q:	7	42495	28591	13904	48.63
	V:	16.78	1725	871.79	853.25	97.87
	\$:	16.69	379	182.73	196.69	107.64
EUROPEAN UNION	Q:	21	131953	136217	-4264	-3.13
	V:	26.13	2686	2,533.86	152.15	6
	\$:	26.09	593	532.48	60.4	11.34
CHINA	Q:	20	124141	126008	-1867	-1.48
	V:	14.93	1535	1,568.30	-33.23	-2.12
	\$:	15.02	341	330.99	10.32	3.12

SOUTH EAST ASIA	Q:	28	172892	123500	49393	39.99
	V:	15.5	1593	1,238.05	355.21	28.69
	\$:	15.54	353	262.01	91.19	34.8
MIDDLE EAST	Q:	5	31170	28666	2504	8.74
	V:	4.92	506	460.1	45.64	9.92
	\$:	4.91	112	96.6	15.04	15.57
OTHERS	Q:	10	63340	74326	-10985	-14.78
	V:	7.49	770	771.7	-2.04	-0.26
	\$:	7.48	170	161.7	8.2	5.07
Total	Q:	100	622291	566671	55620	9.82
	V:	100	10280	8,513.49	1,766.60	20.75
	\$:	100	2273	1,796.96	475.79	26.48

In view of the export trend noticed for past 3 quarters of the current financial year, India would be setting

new benchmark in export of marine products. Exports during 2010-11 are likely to reach US\$ 2.3 billion,

achieving 15% growth in comparison to previous year.

MPEDA Participated in Busan International Sea Food Expo 2010

Busan International Sea Food and Fishery Expo 2010 (BISFE), one of the major Sea Food Exhibitions in Asia was held from 11-13, November 2010 at Bexco Internatinal Convention Centre, Busan, South Korea. The exhibition was opened on November 11th at 10 a.m. in Hall No.2 of BEXCO (Busan Exhibition and Convention Center), Busan - 612-827, South Korea. The show was organized by National Federation of Fisheries Co-operatives, Korea Fisheries Association and supported by Ministry for Food, Agriculture, Forestry and Fisheries, Ministry of Knowledge / Economics, Korea Fishery Trade Association and Korea Overseas Fisheries Association. Exhibition included HACCP, Seafood, Seafood Processing Equipment, Marine-Bio Science and Technology, Theme Booth etc. There were altogether 257 stalls consisting of 185 from Seafood sector, 57 from Equipment Manufacturers and 15 from Marine-Bio Science and

Technology. Buyer-seller Business Meeting, Korean Business Meeting, Industrial-business Tour to Processing plants, Landing Centers etc. were part of the show. Conferences were

organized by Korean Maritime fisheries New Intellectual Association. Symposiums also were held simultaneously along with the Exhibition. The symposium on



Smt. K.M. Veena, Jt. Director and Shri K N Vimalkumar, Dy. Director (Left) receiving visitors to the Stall.

HACCP, Korean Japan joint symposium on Aquaculture, Aquaculture Seminar 2010, Technology for HACCP Adoption, Symposium on Prospect and Outlook and Food Processing for HACCP Adoption were some of the subjects dealt with.

About 35 countries participated in the show. The major exhibitors were from USA, Canada, Switzerland, Malaysia, Thailand, Vietnam,

Indonesia etc. There were also visitors from countries like Israel, Japan, U.K., UAE, India etc. MPEDA took 36 square meter area and displayed various seafood products including samples of value added products / traditional packs. MPEDA's films on value addition, aquaculture, quality control etc. were projected in the stall on all the 3 days of the show. The show helped MPEDA to show case India's resources as well as to project the

recent development taking place in value addition in India. The show came to an end at 4 p.m. of 13th November 2010. The Busan International Seafood Expo is being organized every year.

Smt. K M Veena, Joint Director, Regional Office, Kochi and Shri K N Vimal Kumar, Deputy Director (Stat.), Head Office, represented MPEDA at the show.

MPEDA Delegation Visits Mauritius

Based on a request from Hon'ble Minister of Industry & Commerce, Govt. of Mauritius, Mr. Shaukathally Soodhun, a two member delegation from MPEDA deputed by Ministry of Commerce & Industry, Govt. of India visited the Republic of Mauritius, a tiny island nation in the Indian Ocean east of Southeast African coast. The visit of the delegation consisting of Shri S. Sasidharan Pillai, Joint Director (Marketing) and Dr. Ram Mohan M K, Deputy Director (Marketing Services), was aimed at enhancing the export of marine products especially shrimps, to Mauritius.

Mauritius imports about 60% of their seafood demand from other countries that includes African

nations, Seychelles, Madagascar, China, Thailand, Vietnam, Singapore, Sri Lanka, India etc. The annual per capita consumption of fish is about 22kg. Shrimps form a major import. Import statistics reveal that they have imported 1651 tons of fish and fishery products valued at MR. 260,095,911 (US \$ 8.67 million) in 2009 and 1396 tons worth MR.245,617,037(US \$ 8.2 million) during 2010. However our exports to Mauritius was to the tune of 743.98 tons valued at US \$3.62 million in 2009-10 and 816.17 tons (US \$4.93 million) in 2010-11(9 months).

The country had 2300 fishermen and about 1543 boats in 2007. The country has vessels above 24m length also, that go for a voyage of 9-10 days.

Due to lack of sufficient technologically advanced fishing fleet sufficient to exploit its EEZ, Mauritius issues licences to foreign vessels for exploitation of fish stock in their EEZ. This included vessels from EU, based on an agreement between EU and Mauritius. The bigger foreign vessels fish mostly in international waters and they have on board freezing facility and could be there at sea for about 3-4 months. They come to shore either for bunkering provisions, fuel etc. or to declare the catch.

There is a Vessel Monitoring System (VMS) that monitors all licensed fishing vessels and the software is developed with the help of M/s. Blue Finger Ltd., UK. VMS is a monitoring body that coordinates with similar bodies in the South West Indian Ocean Fisheries Project (SWIOFP) that comprises countries like Comoros Islands, Reunion (France), Kenya, Madagascar, Mozambique, Seychelles, South Africa and Tanzania besides Mauritius.

During last year, about 1,20,000 tons of tuna was sourced from these vessels for processing. 45% of the tuna caught was from Mauritian EEZ while 55% was from international waters. The country has about 11 EU approved units and they are monitored by the competent Authority for compliance to Codex Alimentarius principles and EU



Mr. S. Sasidharan Pillai, JD(M) (Centre) and Dr. Ram Mohan M. K, Dy. Director (MS) having discussions with Mr. Shaukathally Soodhun (L), Hon'ble Minister of Industry & Commerce, Govt. of Mauritius.

regulations. The CA conducts about 4 official audits and each consignment is inspected prior to export. The major products exported are canned tuna, tuna in jars, frozen tuna and other fish, tuna loins, chilled tuna etc. mainly exported to EU & USA. The country has got 8 commercial vessels for lethrinids (snappers), which is a major fishery in Mauritius. The country has imposed some restriction on import of lethrinids so that the domestic fishery is not affected. Despite, it permits import of those fishes to cater to the domestic demand during the lean season of lethrinid fishery. There are good opportunities for importing shrimp as their production is low and comprised mainly of the Deep sea variety, *Heterocarpus laevigatus* caught from 800-1000m depth. Mauritius imports a lot of freshwater ornamental fishes mainly from Hong Kong and Singapore.

The delegation met various officials associated to fisheries research, import, fish farming, processing and quality control. A meeting with seafood importers and Board of Investments (BOI), Mauritius was also arranged. The delegation made visits to Albeon Fisheries Research Station, a tuna processing unit, hyper markets as well as Red Tilapia farm.

Once a container is imported, based on satisfactory documentation requirements, the container is released immediately within 24 hours. Hence there is no demurrage incurred by the importer. Inspection of the cargo is done by Health, Customs and Fisheries Departments. Samples for testing are drawn randomly. India enjoys a low testing frequency while for some others it is more. Few importers expressed willingness to import *Pangasius* from India as Mauritius is not sourcing *Pangasius* from Vietnam at present.

From AFRS, it is understood that commercial cage farming of Red drum



(L – R) Mr. Prashant Pise, Dy. High Commissioner of India, Mr. M. Ganapathy, High Commissioner of India, Embassy of India, Mauritius, Mr. Shaukathally Soodhun, Hon’ble Minister of Industry & Commerce, Govt. of Mauritius, Mr. Sasidharan Pillai, Joint Director (M) & Dr. Ram Mohan M.K., Dy. Director (MS), MPEDA.

(imported from USA) is being done by a private entrepreneur in the south and trials are on to develop farming of Cobia, Rabbit fish (*Siganus* sp.) and European Sea bass (*Dicentrarchus labrax*). Proposals are in pipeline to seek expert consultancy in farming sea cucumber *Holothuria scabra*, sea conch (*Trapezium*) and sea weeds.

The delegation made a courtesy call to the Hon’ble Minister of Industry & Commerce, Govt. of Mauritius, Mr. Shaukathally Soodhun, who has sought close cooperation among Indian exporters and Mauritian counterparts in importing good quality seafood to Mauritius and solicited India’s help in setting up laboratories for testing seafood. Hon’ble Minister has praised the quality and taste of products of Indian origin and suggested a publicity campaign by participating in food fairs to promote Indian seafood as they expect more than a million tourists to visit the country this year.

The delegation also made a courtesy visit to Mr. Nicolas Von-Mally, Hon’ble Minister of Fisheries & Rodrigues, Govt. of Mauritius. Hon’ble Minister has sought close cooperation among Indian research institutions and Mauritian counterparts in transfer of aquaculture technology that is suitable

for Mauritian environment. His Excellency the High Commissioner of the Embassy of India, Mauritius, Mr. M. Ganapathy and Mr. Prashant Pise, Deputy High Commissioner also joined the delegation while making courtesy calls to both Ministers. The interactions by the delegation with the Ministers and Government officials were widely covered by media. Mauritius Broadcasting Corporation also covered the visit in their radio and TV channels.

Import of Indian seafoods to go up

Independent News Service
Port Louis, February 23

Mauritius expects to increase its import of seafood from India. This is the outcome of a meeting which took place between the minister of Industry and Commerce, Shaukathally Soodhun, and an Indian delegation on Wednesday.

This meeting follows the visit of Soodhun to India last year where he met Leena Nair, chairperson of Marine Products Exports Development Association (MPEDA). Discussions focussed on the possibility of continuing the import of seafood from India to Mauritius.

A delegation comprising Pillay Sasidharan, joint director of marketing and MK Mohan, deputy director of marketing services, are in Mauritius since February 21.

“We are studying the needs of various sectors with regards to consumption of seafood, in particular the tourism and hotel industry,” said Sasidharan.

“Our products meet European standards and we also export them to the United States,” he added.

“When I visited the MPEDA, I was surprised by what they produce. These products are scarce for the Mauritian population as they are mainly available in hotels,” said Soodhun.

Moreover, the Indian delegation had a working session with officers of the Import and Export Division of the Ministry of Industry and Commerce on Wednesday.

“We will ask the State Trading Corporation to start with the import of seafood,” Soodhun stated.

News Back to the Independent

Report appeared in the media in Mauritius.

IMPORTERS OF SEA FOOD IN MAURITIUS

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Email aquafood@orange.mu

ERSA Company Limited

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Quatres Bornes
Fax 720 5588
Tel (230) 464 5457

Explorateur

Mosque Road, Fond du Sac
Tel (230) 269 0559
Fax 263 9374

Fish & Shell Fish Processors Ltd

SIPF Building, Place N. Mandela
Port Louis
Tel (230) 212 0212
Fax 208 2913
Email jack@orange.mu

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Rte Mariamen, Cap Malheureux
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Fax 282 1616
Email amigo@intnet.mu
Web www.bellamigo.com

Hassen Taher Sea Foods (Mtius) Ltd

26 Madame St, Camp Levieux
Rose Hill
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Fax 464 9085
Email bktaher@intnet.mu

Harpoon Co Ltd

Highlands, Phoenix
Tel (230) 696 7235
Fax 696 7235

Marina Foods Ltd

No 25 Blk B,
La Colline Commercial Centre
Candos, Quatre Bornes
Tel (230) 465 3508
Fax 465 3508

Baar Importer & Distributor Ltd

Cnr. Perdrix & SSR Avenues
Sodnac, Quatre Bornes
Tel (230) 427 5296/ 425 8202
Fax 427 5297

Hees Co. Ltd

2, Osman Avenue, Qutre Bornes
Tel (230) 466 9722
Fax 466 3363
Email hees@heescompany.com
Web www.heescompany.com

Mapoo A. T. M. & Cie

Port sud Est, Rodrigues
Tel (230) 831 6356
Fax 831 6356

Kool Food Ltd

Royal Road, Mon Desir, Vacoas Tel
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Email marina@intnet.mu

Sealord Fishing Limited

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Paeilles
Tel (230) 212 6828
Fax 211 2795
Email ghina@intnet.mu

Seaqueen Foods Mauritius Limited

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Vacoas
Tel (230) 686 0812
Fax 686 0398
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Email: markaquarium@gmail.com

US CUTS DUMPING DUTY ON INDIAN SHRIMP IMPORT

(Its sweet and sour for shrimp exporters to USA)

The US Department of Commerce in its notice dated 28th February 2011 has announced the Preliminary results in the 5th Administrative Review of Anti-Dumping investigation on Shrimp imports from India for the period from 1st February 2009 to 31st January 2010.

Accordingly, the weighted-average dumping margins for M/s. Falcon Marine Exports Limited, a mandatory respondent, for the above period is 1.36%, while that for M/s. Apex Exports, another mandatory respondent, is 2.31%. For all others it is 1.69%. The notice also contains names of each company to which Specific Average rate of 1.69 is applicable.

However, the country was unable to convince the US ITC to revoke the antidumping order, despite submission of sufficient factual information and legal arguments in support of revocation and decided to continue to impose anti-dumping duties on frozen warmwater shrimps imported from Vietnam, China, Thailand, India, and Brazil. Our arguments were overpowered by the great deal of public sympathy received by domestic shrimp industry due to the problems that it has faced, including four devastating hurricanes since 2005, a tripling of diesel fuel prices, and most recently the BP oil spill in the Gulf of Mexico. According to the USITC, the decision was made due to the likelihood of huge losses in the US shrimp industry, had the anti-dumping duties been removed.

As a result of the voting, DOC will extend its imposition of anti-dumping tariffs on shrimps imported from Vietnam, China, Thailand, India, and Brazil for five years.

QUALITY FRONT

Antimicrobial Resistance – Special reference to Aquaculture

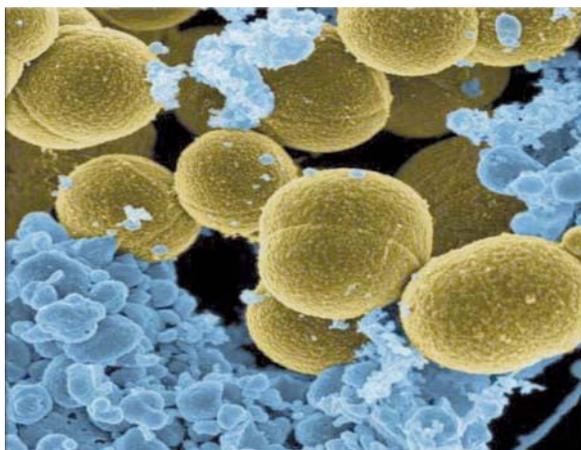
Shri Abhilash E.C, Quality Control Lab, MPEDA, Cochin

Antimicrobials are natural or synthetic drugs which inhibit or kill bacteria. This capability makes them unique for the control of deadly infectious diseases caused by a large variety of pathogenic bacteria. As aquaculture has developed, a range of bacterial diseases have been encountered that have caused both major production problems and animal welfare difficulties. These diseases were initially controlled almost exclusively by the use of antimicrobial agents. But the continuous use of antibiotics lead to the establishment of antimicrobial-resistant microorganisms. Development and spread of antimicrobial resistance has become a global public health problem influenced by the use of antimicrobial agents in both humans and animals. It is generally acknowledged that the use of antimicrobial agents drives the emergence of antimicrobial-resistant microorganisms and further promotes the dissemination of drug-resistant bacteria and

resistance genes. In fact, majority of gastrointestinal diseases by some bacteria do not require antibiotic treatment and are self-limiting. But unnecessary use and indirect entry of such antibiotics from food will cause antibiotics resistant bacteria. Many antimicrobial agents used in human medicine are also used in aquaculture and the main antimicrobial agents used in aquaculture worldwide and their importance in human medicine as identified by World Health Organization (WHO) are considered

as “Critically Important Antimicrobials for Human Medicine”.

Bacteria are major disease causative agent in aquatic animals, especially, Vibrios. In the past decade, many countries have used antibiotics such as Streptomycin, Oxytetracyclin and Erythromycin against vibrios. Formerly antococcidian therapeutants such as lasaloids, Sulphamethazine, Sulphaquolonexalline, Romet (Sulphamerazine+ormetoprim,5:3) etc., were used against renal coccidia of abalone in California and other countries. Fungal infections were one



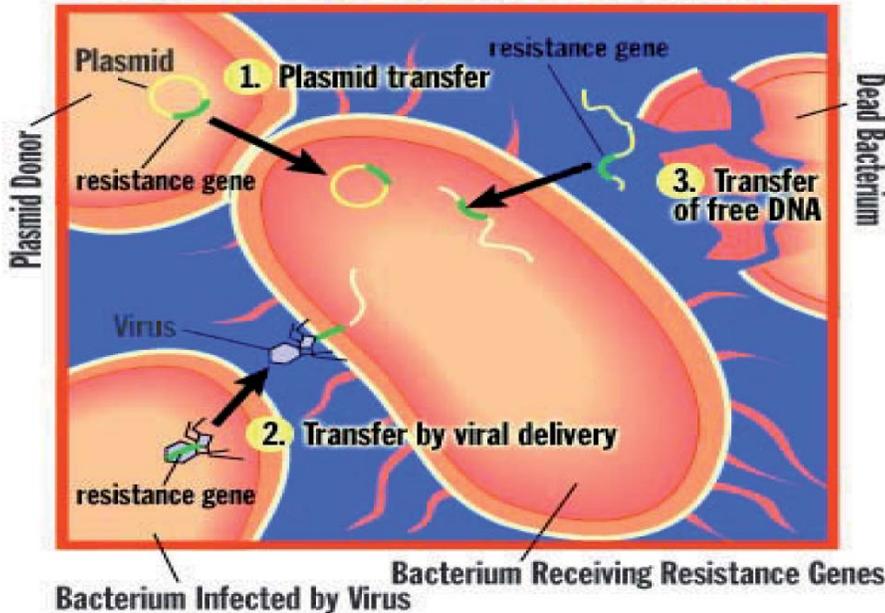
Antibiotic resistant Staphylococci bacteria

of the major problems associated with 100% mortality with shrimp and crabs and also in Tilapia culture world wide. In earlier times, many countries were used different fungicides against mycosis and Cycloheximide was used against parasites in fish culture. Afterward, it has been found that use of such antibiotics would cause dangerous health trouble in human bodies. In continuation of that WHO, European Union and US FDA banned use of many antibiotics in aquaculture and clinical sectors.

Mutation is one of the factors for the antimicrobial resistance and some time the mutated bacteria could able to survive in the presence of high dose of antibacterial agents. Then by plasmids, which are DNA molecule that is separate from, and can replicate independently of, the chromosomal DNA. The ability of gram-positive bacteria to exchange DNA via conjugation is often overlooked by microbiologists; however, it is a very effective means for transmitting antimicrobial agent resistance genes among organisms. Also the ability of microbes accumulate resistance genes by genetic exchange and develop into multidrug-resistant pathogens is also a reason for the antimicrobial resistance. Genetic exchange from gram positive bacteria to gram negative was also to be found a reason for resistant bacteria in aquaculture. Apart from that, uses of antibiotics can also create antibiotic resistance in non-pathogenic bacteria, the resistance genes of which can be transferred to disease-causing bacteria, resulting in antibiotic-

resistant infections for humans. For example, *Aeromonas* is one of the pathogenic bacteria with a habitat of aquatic environment and it can cause only mild gastroenteritis in human. Transferable R-plasmids have been found in *Aeromonas salmonicida* encoding resistance to chloarmphenicol, sulphonamide and streptomycin in Japan and to combinations of Sulphonamide, streptomycin, Spectinomycin, Trimethoprim and/or tetracycline in Ireland.

Transferring Resistance Genes



Occurrence of resistance to these antimicrobial agents in human pathogens severely limits the therapeutic options in human infections. So the issue on the antimicrobial resistance still continues and the widespread abuse of antimicrobials in aquaculture is of serious concern given the alarming emergence in humans of bacteria, which have acquired, through this use, resistance to antimicrobials. Therefore, it is an urgent need to review the current usage patterns of antimicrobials in aquaculture to identify looming hazards in food safety and infectious disease control in humans.

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AQUACULTURE SCENE

Visit of Chairman MPEDA to leading Aquaculture centres in USA

Oceanic Institute, Hawaii

Ms. Leena Nair, IAS, Chairman MPEDA, accompanied by Mr. Y C Thampi Sam Raj, Project Director, RGCA visited important aquaculture centres in USA from 5th December to 10th December, 2010. The team had visited the Oceanic Institute, Hawaii, an affiliate of Hawaii Pacific University, the leading applied aquaculture technology development centre and also the pioneer institute which perfected the production of domesticated SPF *L.vannamei*. The team had discussion with Dr. Shaun Moss, Vice President, Oceanic Institute and his team on availing the technical support of the Oceanic Institute in setting up of a brood stock multiplication centre for *L.vannamei* in India by Rajiv Gandhi Centre for Aquaculture, the R&D arm of MPEDA for producing SPF brood



Ms. Leena Nair, IAS, Chairman MPEDA is at the hatchery facility of Kona Blue Water Farms, Hawaii. Seen in the picture are Dr. Neil Sims (L) and Mr. Michel Smith (R) Aquaculture Engineer of M/s Aquasmith, USA.

stock. The Oceanic Institute welcomed the interest evinced by MPEDA - RGCA and agreed in

principle to provide the technical know - how to set up the multiplication centre in India.

Kona Blue Water Farms, Kona, Hawaii

Kona Blue Water Farms is one of the pioneer open sea marine fin fish farms in the world, specialized in producing Yellowtail (*Seriola rivoliana*), a premium sushi - grade species in under water oceanic cages. The team had visited the on shore hatchery facilities as well as open ocean submersible cages. Productive discussion with Dr. Neil Sims, President and CEO of Kona Blue Water Farms was held on areas of mutual interest of applied research on marine finfish aquaculture and on the possibilities of future collaborative programmes on ocean aquaculture in India.



Ms. Leena Nair, IAS, Chairman, MPEDA and President RGCA with Dr. Shaun Moss, Vice President, of Oceanic Institute (right), Dr. Steve Arce, Research Associate and Shri Thampi Sam Raj, Project Director, RGCA (Left)

AQUACULTURE SCENE



Open Ocean Submersible Aquaculture Cage of Kona Blue Water Farms, Hawaii



Ms. Leena Nair, IAS, Chairman, MPEDA and Project Director, RGCA (L) with the team of Dr. Donald Lightner (4th from left)

Aquaculture Pathology lab, Department of Veterinary Science and Microbiology, University of Arizona, USA.

The Aquaculture pathology lab headed by Professor Donald Lightner, the world renowned shrimp pathologist, has been extending pathology screening support for the

domestication of tiger shrimp project of RGCA at Andamans. In order to develop a long term shrimp pathology diagnostic support with Aquaculture Pathology lab of University of Arizona, the team made a visit to the laboratory of Dr. Lightner and held elaborate discussions on areas of shrimp pathology support for

domestication of tiger shrimp project of RGCA. The entire team of Dr. Lightner joined in the discussions and expressed their willingness to develop an MOU with RGCA on providing consultancy on shrimp pathology diagnostics and also in setting up a state-of-the-art pathology lab at RGCA.



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Successful diversified aquaculture and value addition of green mussel (*Perna viridis*)

Introduction

Mussels are a group of aquatic molluscs widely distributed in the rocky shores of the country, particularly in Kerala. Green mussels are efficient filter feeders, low in the food chain and can be grown in the coastal areas where high saline water is available at least for 4 to 6 months. Usually, the juvenile spat of the mussel were collected from the coastal belt and meat sold locally affecting natural diversity of green mussels. Mussel Farming Demonstration programmes both in Northern and Southern Kerala were launched by MPEDA to popularise the fattening of green mussel and creation of value added products during the year 2008 to 2010 through demonstrations and training programmes.

Green mussels are cultured in three ways, viz., Rack culture, Raft culture and On-bottom culture. The popular rack culture was adopted by MPEDA. Bamboo poles are pegged firmly to the soil vertically at a distance of 1m in 25 sq.m area (5m x 5m). Bamboo poles are also tied horizontally on the pegged bamboo

poles in criss-cross manner. 1.5m ropes with effective seeding length of 1m are tied on the horizontal bamboo poles so as to hang the seeded ropes vertically into the water column without touching the bottom soil (Vertical mounting). In horizontal mounting method, the seeded ropes are placed on the top of the rack in horizontal manner instead of hanging them vertically.

In horizontal mounting method, Bamboo poles (3 mm long) are stumped into river bottom with a distance of 1 m between vertical poles to cover an area of 10x15 mtrs. Bamboo poles were used to make racks on the erected poles by tying them below 4 feet from water level during low tide.

The seeded ropes are left undisturbed and mussels, being filter feeders, feed on the phytoplankton available in the water. The rack structure erected is well protected and the water flow, hydrographical parameters and productivity of the water are conducive for the growth of green mussel. The seeded ropes are allowed to grow undisturbed.

The Regional Centre, Kochi

undertook two Demonstration programmes during the year 2008-09 of which one was at Ayiramthengu in Kollam Dist. and the other at Pattanam in Ernakulam Dist. by Vertical mounting method.

The Sub-regional Centre, Kannur conducted two Demonstration programmes on Green Mussel Rack Culture at Balathuruthy/Vallikkunnu, Malappuram District during 2008-09 and at Vadakumbad, Kannur during 2010 by Horizontal mounting method.

Stocking and Farming

Mussel seeds or spats were collected mainly from the Thankasseri coast in Kollam Dist and Kanhangad in Kasaragod Dist. The seeds were transported to the farm site and the mussel seeds were acclimatized overnight and seeded on the ropes inside a cotton net bag.

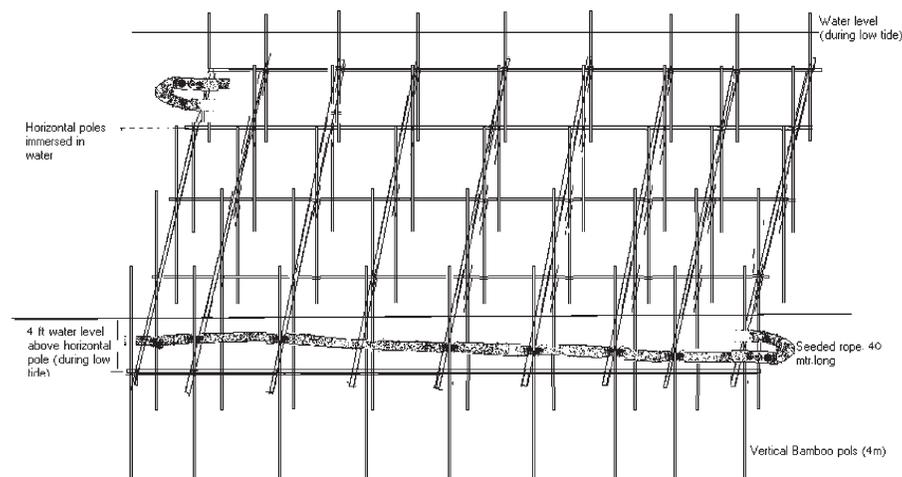
Periodic cleaning of silt deposited on the mussels and monitoring of mussel stock were carried out. The important Water quality parameters were noted during the culture period from date of seeding to harvest. Growth parameters by length and weight were checked.

Harvesting

After attaining marketable size, the mussels were harvested manually.

Marketing

Mussel meat is having high local demand. The harvested materials were sold in the local market. Owing to the high value of fin fishes and the scarcity on the availability of fin fishes the demand for mussel increased more than expected. The present market value of mussel is comparatively lower



Graphic presentation of racks erected with seeded rope horizontally mounted

AQUACULTURE SCENE



Seeded ropes



Rack ready for stocking



Monitoring of Mussel stock



Harvested Mussel

than the unit value of seafood. One kg of finfish costs about Rs.80/- or above at the same time 1kg of Shell on mussel costs only Rs.35/-. So average income individual prefers to buy mussel in comparison to fish.

Outcome of the Demonstrations

1. Comparison of growth

From the comparison, it is clear

that the average daily growth by length and weight of spat is better in Northern regions of Kerala compared to that of Southern Kerala. At Vadakumbadu in Kannur Dist., the growth by length and weight showed a remarkable achievement wherein within a short culture period of 76 days the Mussels attained 50 gm size where as in other demo sites this weight is attained by 130-170 days of

culture. This may be due to the favourable water quality conditions such as uniform salinity throughout the year, limited inflow of water during demonstration period etc. of the site.

The reason for the poor growth of mussel at Kollam was mainly because of fouler settlement by edible oyster and barnacle which retarded growth.



Mussel just after harvest



The farmers with the harvested mussel



Shucked mussel meat



Mussel Pickle and Mussel Cutlet prepared in the Training Programme

2. Average meat weight in relation to site

It is evident that the meat weight is more or less same (16-18gm) in the mussel cultured at various demo sites except in Kollam dist. Here the growth was very poor 12-14 gm (170 days of culture) with a meat weight of 6 gm only. This may be due to the unsuitability of the area for Mussel culture.

In case of Vadakumbadu Demo., the mussel attained the meat weight of 18 gm with a culture period of 76 days which may be due to the favourable ecological and hydrological parameters of the site for mussel culture.

3. Growth in relation to water quality parameters

The water quality parameters, mainly the PH & salinity have a major role in the growth of the mussel. The optimum salinity and PH range at Vadakumbad site favoured the faster growth of the mussel within a short culture period of 76 days.

4. Spat cost

The hike in the spat cost at Malabar Region is due to the ban on spat collection by the District Collector.

5. Economics of culture

It is evident from the Demo. that, if the site is suitable for mussel farming we can make a good profit within a short period of culture. This comparison also shows that the Demo. at Pattanam & Vadakumbadu is

comparatively profitable than the other two programmes. The profit per man day with MPEDA support is very good at both places and augurs well for regular employment for a group/person for operating as a unit/s. Further, operating more than one unit is found always profitable than single unit operation.

6. Value addition and Marketing

Many value added products can be prepared from the Mussel meat such as Pickles, Fry, Curries, Arikadukka etc. Different methods like chilling, boiling, frying, cooking etc. are used for making value added products.

Major share of the Mussel meat produced is now going to the domestic market. The main constraint for exporting the material is the presence of high levels of E.coli and Salmonella sp. in the Mussel meat, as these organisms are filter feeders. If we could overcome this problem, the mussel meat can be exported.

Mussel meat is having high local demand. The harvested materials were sold in the local market. Owing to the high value of fin fishes and the scarcity on the availability of fin fishes the demand for mussel increased more than expected. The present market value of mussel is comparatively lower than the unit value of seafood. One kg of finfish costs about Rs.80/- or above while at the same time 1kg of Shell on mussel costs only Rs.35/-. So average income individual prefers to buy mussel in comparison to fish.

Outcome of the demonstrations

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It is evident that the meat weight is more or less same (16-18gm) in the mussel cultured at various demo sites except in Kollam dist. Here the growth was very poor 12-14 gm (170 days of culture) with a meat value of 6 gm only. This may be due to the unsuitability of the area for Mussel culture.

In case of Vadakumbadu Demo., the mussel attained the meat weight of 18 gm with a culture period of 76

AQUACULTURE SCENE

days which may be due to the favourable ecological and hydrological parameters of the site for mussel culture.

3. Growth in relation to water quality parameters

The water quality parameters, mainly the PH & salinity have a major role in the growth of the mussel. The optimum salinity and PH range at Vadakumbad site favoured the faster growth of the mussel within a short culture period of 76 days.

4. Spat cost

The hike in the spat cost at Malabar Region is due to the ban on spat collection by the District Collector.

5. Economics of culture

It is evident from the Demo. that,

if the site is suitable for mussel farming we can make a good profit within a short period of culture. This comparison also shows that the Demo. at Pattanam & Vadakumbadu is comparatively profitable than the other two programmes. The profit per man day with MPEDA support is very good at both places and augurs well for regular employment for a group/person for operating as a unit/s. Further, operating more than one unit is found always profitable than single unit operation.

6. Value addition and Marketing

Many value added products can be prepared from the Mussel meat such as Pickles, Fry, Curries, Arikadukka etc. Different methods like chilling, boiling, frying cooking etc. are used for making value added products.

Major share of the Mussel meat produced is now going to the domestic market. The main constraint for exporting the material is the presence of high levels of E.coli and Salmonella sp. in the Mussel meat, as these organisms are filter feeders. If we could overcome this problem, the mussel meat can be exported.

Mussel meat is having high local demand. The harvested materials were sold in the local market. Owing to the high value of fin fishes and the scarcity on the availability of fin fishes the demand for mussel increased more than expected. The present market value of mussel is comparatively lower than the unit value of seafood. One kg of finfish costs about Rs.80/- or above at the same time 1kg of Shell on mussel costs only Rs.35/-. So average income individual prefers to buy mussel in comparison to fish.

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FAO guidelines for fishery management

The United Nations Food and Agriculture Organisation (FAO) recently released the first global guidelines for the by-catch management and reduction of fishing discards which covered all types of by-catch including discards, that is, fish that are caught accidentally and then thrown back into the sea either dead or dying. Unmanaged by-catch and discards threaten the long-term sustainability of many fisheries and adversely affect the livelihoods of millions of fishers and fish-workers. The guidelines will now go to a committee on fisheries for endorsement when it meets in Rome at the end of the month. The guidelines had been agreed to by fisheries experts from 35 countries who met at FAO last month.

“By-catch” may also include endangered species, seabirds, juvenile fish, turtles, seabirds, dolphins and so on. Depending on the definition used, current by-catch may be in excess of 20 million tonnes a year. In some countries by-catch has an economic value and is consumed, making it hard to estimate the scale of the wastage.

“These are the first guidelines to cover all species encountering fishing gear,” said FAO fishing technology expert Frank Chopin. The guidelines extend the principles of fishery management to all species and all areas of concern. Although the Code of Conduct for Responsible Fisheries refers to by-catch and discards, these guidelines elaborate more clearly how countries should address by-catch and discards problems in practice.

Chopin noted that the by-catch guideline had been requested by the countries themselves and was another important step towards applying an ecosystem approach to fisheries management. Chopin said care had been taken so that the guidelines

would not place an undue burden on poor artisanal fishers and on developing states. “The guidelines emphasise doing an assessment of the situation first to see if there is a

problem. The social, economic and biological impacts of applying these guidelines need to be studied in each case,” he added.

- Fishnews.com

India among top 10 fish producers

India continues to be among the top 10 producers of marine and inland capture fish, according to a FAO report on Monday.

India has seen 80.8% growth in inland capture fisheries produce between 2004 and 2008, to 9,53,106 tonne; and continues to be among the top 10 producers from marine and inland capture fisheries, with 4.3 million tonne produced in 2008; and the nation also features in the list of

“re-stocking of wild populations, improved coverage within data collection systems, or a tendency to report continuously increasing production.”

According to the report, Asia’s average annual production per person of fisheries and aquaculture products of 2.4 tonne, a tenth of that of Europe, also signals the key social role of small-scale fisheries in these countries. China alone employs 13.3 million in



top 15 aquaculture producers by quantity and growth that year, United Nations Food and Agriculture Organization’s biennial State of the World Fisheries and Aquaculture report released in Rome, said, remarking the industry’s growth in Asian countries such as China and India.

The UN FAO report said the “striking increment” in inland water catch in countries such as India (80.8%), Bangladesh (44.8%) and Myanmar (79.4%) in the four years since 2004 may be seen as being indicative of sound fishery management in South Asia—including

fishing, accounting for one-third of the world total. The report also points to the growth in employment opportunities in the sector in India and Indonesia.

India experienced a growth rate of 7.1% in aquaculture production during 1990-2008, from 1,017,000 tonnes to 3,479,000 tonne, compared with 9.4% growth experienced by China (No.1 on the list, with production exceeding 30 million tonnes in 2008) and the 16.4% growth in aquaculture seen in Vietnam.

India also contributed 15.7% of the world’s carp freshwater fish catch.

- The Financial Express

Multi-purpose National Identity Cards for Orissa fishermen

Altogether 36,500 fishermen in 228 coastal villages in Orissa will be provided Multi-purpose National Identity Cards as a preventive measure against infiltration.

“The enumeration and data entry work has ended. Photography and fingerprint biometric work for issue of the National Multi-purpose Identity Cards is on in full swing in infiltration-prone coastal Jagatsinghpur and Kendrapara districts,” Assistant Director of Fisheries (Marine) Rabi Narayan Pattnaik, said.

“As the project is of paramount national importance, we are laying emphasis on issue of I-cards by February end. A National Identity Number will be assigned to each individual. This number will become a link number with any other application of the state government,” Mr. Pattnaik said.

The exercise is being conducted jointly by the National Population Registrar (NPR), Ministry of Home Affairs and the state government’s marine fisheries department.

The I-cards would provide nationality, professional and legal proof and lead to easy detection of infiltrators, masquerading as fishermen.

Under NPR directions, around 37,000 fishermen in 112 coastal villages of Kendrapara district and 116 villages of Jagatsinghpur district were covered by a survey, Mr. Pattnaik said.

The enumerators gathered information such as genealogical order of the family, nativity status and fingerprints of those aged above 18.

The Electronic Corporation of India Limited (ECIL) was now carrying out photography and related technical jobs. “We are hopeful that I-card disbursement will be complete within the stipulated time-frame,” he said.

“The Multi-purpose National Identity Card can be useful in identifying illegal immigrants and subversive element using the sea route,” Saroj Kumar Sahu, commandant, Coast Guard, Paradip said.

- The Hindu



A fisherman mends his net after a catch in Gopalpur, Orissa

Aquaculture tipped to ‘feed the world by 2050’

Aquaculture can make a significant and sustainable contribution to feeding the world in 2050. That’s the conclusion of a booklet published by fish feed giant Nutreco.

To succeed, say the contributors, aquaculture must be developed in a responsible manner. The booklet features introductory texts from FAO and WWF, which lead on to sections on the challenges, the potential role and the opportunities for aquaculture as a provider of protein for the population of the earth in 40 years time.

Wout Dekker, Nutreco chief executive, said: “We addressed the challenge for agriculture in our 2010 Feeding the Future booklet. Aquaculture has an equivalent challenge; contributing to the doubling of food production while halving the footprint. Seafood is widely appreciated as tasty and excellent nutrition. However, the ocean fisheries cannot increase yields without destroying the fish stocks on which they depend. Aquaculture must bridge the gap between fisheries and global demand.”

All stages of the aquaculture value chain are represented, from fishmeal and fish oil production through to fish processing and retailing, with top industry contributors at each stage. They are joined by politicians from China and the EU, industry organisations and academics. In his concluding remarks, Knut Nesse, the executive vice-president of Nutreco Aquaculture/Skretting Group, said: “Aquaculture can deliver seafood that is healthy and delicious. By ensuring we keep sustainability central in the growth of aquaculture we will open oceans of opportunity.”

Source:fishnews

GLOBALG.A.P issues new cycle of aquaculture certification

As a result of round table discussions on four continents as well as three public consultations, the scope of the GLOBALG.A.P Aquaculture Standard has been expanded in the new Version 4 to include any hatchery-based species that can be produced under controlled aquatic systems, including the consideration of passive collection of seedlings in the planktonic phase.

This new version reflects a compact and more comprehensive standard for users, stepping into a stricter level of compliance in key activities identified throughout the past years of farm certification experience.

From the launch of the previous version in 2007 until the third quarter of 2010, 500 comments were received from stakeholders representing 116 organizations worldwide that comprise certification bodies, retailers, research centers, universities, NGO's, suppliers, farmers, GLOBALG.A.P National Technical Working Groups for Aquaculture, producer organizations, scheme owners, consultants, the food service industry, the animal health industry and metrology institutes.

GLOBALG.A.P believes in local multi-stakeholder support and an

adaptation of the "Think Global, Act Local" principle. To implement this principle, the National Technical Working Groups (NTWG) - specific for GLOBALG.A.P scopes e.g. Crops, Livestock or Aquaculture - have been established around the globe, whose role is to develop national interpretation guidelines and address identified specific local adaptation and implementation challenges.

In March 2010, GLOBALG.A.P launched the CFM Standard Version 2.0 for certification purposes to define the guidelines for the use of compound feed at the aquatic farming and hatchery levels. In the case that compound feed contains fishmeal and/or fish oil, the species of fish used and its respective country of origin must be identified.

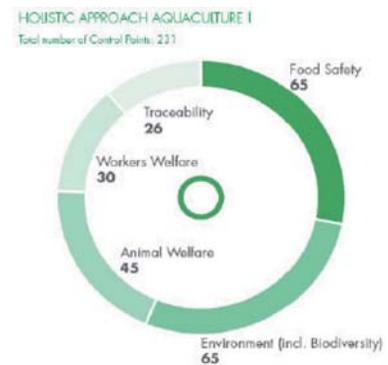
The compound feed must also demonstrate proof that it does not contain species classified as critically endangered or endangered on the International Union for the Conservation of Nature (IUCN) Red List.

The credibility of the GLOBALG.A.P Aquaculture Standard stems from its development process, which relies on stakeholder input through transparent and inclusive standard

setting procedures.

GLOBALG.A.P works with accredited third-party certification bodies operating worldwide to offer the best platform of aquaculture professionals.

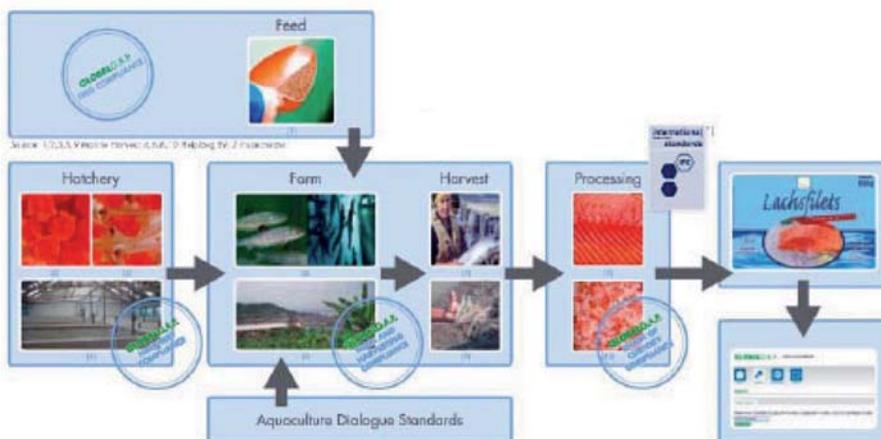
Moreover, through its Integrity Program, GLOBALG.A.P provides a key reliability aspect by conducting surveillance spot checks to evaluate the performance of both farms and certification bodies. GLOBALG.A.P also offers product buyers a database that provides an additional measure of transparency and control.



The new Version 4 of the GLOBALG.A.P Aquaculture Standard breakdown of control points. (Photo: GLOBALG.A.P.)

GLOBALG.A.P Aquaculture has been implemented in 15 countries worldwide for Version 3, covering salmonids, shrimp, tilapia and pangasius species. For Version 4, the species coverage has been expanded and the GLOBALG.A.P platform of certification bodies is ready to attend to any farm wherever its location in order to support responsible sourcing needs.

Version 4 reflects continuous improvement built on the valuable feedback gained from producer and consumer requirements. GLOBALG.A.P will continue operating in a modular approach at farm level and GLOBALG.A.P Chain



GLOBALG.A.P chain of custody

of Custody certification will continue to be available to maintain product certified status throughout the production value chain.

This important certification defines the requirements for hygiene and proper segregation of certified and non-certified products for the processing operation unit and subsequent steps if needed.

Through the GLOBALG.A.P Number identification (GGN), certificates can reflect the origin of the farmed product as well as the processing, packing, warehouse, or any stage of the food production chain when purchasers require proper identification of GLOBALG.A.P certified source.

The World Wildlife Fund (WWF), the world's largest multinational conservation organization, is working with GLOBALG.A.P to provide training to auditors for the aquaculture standards developed by the WWF-initiated Aquaculture Dialogues (AD).

Also, as part of the WWF/ GLOBALG.A.P partnership, GLOBALG.A.P's accredited certification bodies will be trained by GLOBALG.A.P to

audit farms that adopt the AD standards. The AD Standards will be added on in their entirety to the GLOBALG.A.P Standards.

Jose R. Villalon, Managing Director of the WWF-US Aquaculture Program said: "We look forward to the first tilapia producers in Latin America and SE Asia in the coming months to become compliant to the Tilapia Aquaculture Dialogue standards through our interim partnership with GLOBALG.A.P and the joint audit arrangements."

In addition, GLOBALG.A.P certified products automatically undergo Environmental Impact Assessments (EIA) as an integral part of the certification process. This ensures that aquaculture farms not only make animal welfare considerations, but that they are also expected to assess the impact of their farming practices on their immediate environment, thereby encouraging environmental awareness.

Source: Valeska Weymann and Mario Velasco
 editorial@fis.com
 www.fis.com

New FAO website shows location of aquaculture operations

A new website showing the locations of aquaculture sites and their characteristics is now available. The online National Aquaculture Sector Overview (NASO) map collection uses "Google Maps and Google Earth" technology to assist FAO member countries to inventory and monitor aquaculture. The main purpose of this map collection is to illustrate, in general, where aquaculture is taking place. Characteristics that accompany the administrative units or individual farms include; cultured species, technology used, culture systems, environments, farm characteristics, production, quantities and values, seed input quantity and characteristics, and main issues (credit, diseases, environmental impact, etc.).

The overall objective of this activity is to assist member countries inventory and monitor aquaculture. Focal points of the FAO Fisheries and Aquaculture Statistics and Information Service for country statistics are contacted to provide relevant information, however, when focal points are not readily available, then recognized national aquaculture experts and/or aquaculture statisticians from a broad range of institutions who have worked with FAO are consulted.

- Infofish



Modular Approach GlobalG.A.P Aquaculture Version 4.0

Seafood produce lags export demand

India needs to rapidly increase the supply of fish and fisheries product to keep pace with the demand for these products, Seafood Exporters Association of India (SEAI) has said.

While the global and domestic demand for fish is increasing rapidly, Indian supply is not keeping pace due to low productivity and lesser operational efficiency.

“The global demand for fish is growing tremendously and India lags behind in productivity. We have to increase the productivity of our farms through intensified operations,” Anwar Hashim, national president of the SEAI told FE.

According to a report by the National Fisheries Development Board (NFDB), the marine capture fisheries are showing a stagnating trend. Increase in catch has to therefore come from alternative sources such as deep-sea fisheries, aquaculture from freshwater and brackishwater resources, reservoirs and mariculture.

“Our productivity is very poor when compared to some countries like Vietnam. Yield per hectare in Vietnam is as high as 250 tonne per hectare for some species while Indian productivity lags behind at 50 tonne,” Hashim said.

The world market for seafood has doubled to \$49.32 billion within the last decade. India's share is only 2.4%, at present, and it is mainly dependant on shrimp as a product. Globally, fish production from capture fisheries and aquaculture was over 130 million tonne in year 2000 as compared to nearly 20 million tonne in 1950, NFDB reports.

Hashim says that the domestic availability of fish is not rising at healthy rate with growing demand. NFDB projections show that share for

fish demand in India is estimated at 60% for domestic consumption, 7% for exports and 33% for other purposes.

The projected demand for fish in the country by 2012 is 9.74 million tonne, that can be met by the projected supply of 9.60 million tonne by 2012 with major share of 5.34 million tonne from inland aquaculture followed by 3.10 million tonne from marine fisheries. Experts say that share of Indian fish exports to the global exports has remained insignificant during last several years.

According to an International Institute for Sustainable Development report, barely 5% of India's seafood exports are in the processed form. Most exports are in the form of frozen fish. In addition, the Indian brand does not exist in northern markets. In fact, more than 60% of India's exports to Southeast Asia are re-exported after processing. The final consumers of Indian fish in the north are not aware of the origin. The fish market is characterized by uncertainty, though more pronounced in supply than demand.

The Indian seafood industry needs to consolidate in order to achieve global scale and competitiveness, Hashim said. “We need to achieve global sizing like China, Thailand, Vietnam and Indonesia. There is still not a single \$100-million seafood company in India, which is the average size of profitable seafood firms in Asia,” he said.

Unless there is a major consolidation of production, sales and marketing among big Indian seafood companies, the industry will remain a marginal business incapable of effectively competing globally and creating a recognized international brand, he added.

- *The Financial Express*

FAO: Action on responsible fisheries

Aquaculture needs better management to ensure sustainable and responsible growth. Credit: Stephen Ausmus

Countries are making progress in implementing the Code of Conduct for Responsible Fisheries, which is now 15 years old, but still extremely relevant.

However, additional efforts are needed, declared participants at the close of the 29th session of the FAO Committee on Fisheries.

The Committee said that the Code's principles must be more widely included in national policy, legislation and implementation. It encouraged a broader application of the ecosystem approach to fisheries and aquaculture, requesting that FAO provide countries with technical assistance, especially for the problems confronting the world's small-scale fisheries, including inland fisheries.

This was one of the largest Committee meetings, attended by 565 participants, including 115 Member States, specialized UN agencies and observers from over 70 intergovernmental and international non-governmental organisations.

The Committee recognised that IUU fishing is a major global threat to long-term sustainable fisheries, particularly to developing countries. Noting the adoption of the 2009 FAO Agreement on Port State Measures, the Committee agreed that port state measures are a powerful and cost-effective tool in combating IUU fishing and welcomed the forthcoming FAO Technical Consultation on Flag State Performance. It also gave its support to the development of a global record of fishing vessels - an online database to provide vessel-related information on fishing and support vessels - as

another useful tool in the fight against illegal, unreported and unregulated (IUU) fishing.

During its week-long meeting, the Committee also adopted three sets of guidelines - on aquaculture certification, on the ecolabelling of fish and fishery product from inland capture fisheries, and on bycatch management and reduction of discards. Noting the important role of small-scale fisheries the Committee asked FAO to prepare guidelines on small-scale fisheries, focusing on the needs of developing countries and

complementing the Code.

Members also asked FAO to prepare a report on the extent of the implementation of the 1999 International Plan of Action for the Conservation and Management of Sharks.

Aquaculture, acknowledged by the meeting as a key contributor to future food and nutrition security and for its overall benefits to social and economic well-being, needs better management to ensure sustainable and responsible growth.

Regarding climate change, the

Committee told FAO to raise awareness of the role of fisheries and aquaculture in ensuring food and nutritional security and how climate change could affect this relationship.

The Committee also endorsed the reports of the two intersessional Sub-Committee meetings on aquaculture and trade and discussed the programme of work for FAO's Fisheries and Aquaculture Department. The 30th session of COFI will take place in July 2012.

- *worldfishing.net*

Govt unveils steps to help exporters

To make exports competitive, the Union Commerce Ministry on Tuesday announced a slew of measures, including round-the-clock customs clearance at eight ports and reduction in levies that will cut export transaction cost by nearly Rs 2,100 crore.

Releasing the Report of Task Force on Transaction Cost in Exports, Union Finance Minister Pranab Mukherjee said: "I am told that quantum of transaction cost is about 7-10 per cent of total value of Indian exports. This amounts to a significant, about \$15 billion. In that context these initiatives by the Ministry of Commerce is really a welcome step."

Jyotiraditya Scindia, who chaired the task force, is of the view that permanent reduction of transaction cost will have a long term positive impact on the competitiveness of India's exports.

Union Commerce Minister Anand Sharma said that the average cost to move a container within India is \$945, more than double the cost of the export giant China's \$460, Malaysia's \$450 and Vietnam \$625.

After a decline in 2009-10, India's exports, which contributes about 20 per cent to GDP, have grown by an

impressive 29.5 per cent during April-December 2010-11.

Welcoming the report, industry chamber FICCI said, "Permanent reduction of transaction cost through these initiatives will have a long term positive impact on the competitiveness of India's exports."

"Reducing transaction cost is the key to export development as global competitiveness today depends on being able to be a low-cost producer and at the same time a reliable supplier," CII said.

- *New Indian Express*



Finance Minister Pranab Mukherjee along with Union Minister for Commerce & Industry Anand Sharma (L) and MoS Commerce & Industry Jyotiraditya Scindia

“Future of aquaculture feed industry promising”

“The future of Indian aquaculture feed industry looks promising, but India has to go in for more species if it has to progress further,” said P.E. Vijay Anand, Technical Director, India Animal Feed Program, American Soyabean Association – International Marketing, on Monday.

Addressing a technical session on the ‘Status of the Indian aquaculture feed industry and future trends’ on the second day of ‘Aqua Aquaria 2011,’ he said that India invariably relied on two species – carps and pungsias, whereas China and Bangladesh had about 15 species. The dependence on lesser number of species meant more risk.

“The industry is wide and options are many. The industry need not have to reinvent the wheel as Asia is the biggest player in the aquaculture sector. Just do the ranking and see where India is. It will be an eye-opener. We just have to borrow technology from China or Taiwan and adapt it to our conditions. We should have at least seven species,” he said.

He also said that the number of fish feed production mills in the country have gone up to about 10 since 2008 and the installed capacity would be 1.2 million tonnes by 2012.

To improve profitability, he urged the players to reduce dependence on traditional feeds and to go in for modern ones; adopt cage culture and have proper fish processing market.

Rajiv Gandhi Centre for Aquaculture (RGCA), the R&D arm of Marine Products Export Development Authority, has established a facility in Vijayawada to produce mono-sex tilapia in two strains, said the Project Manager, S. Vijayakumar.

Tilapia farming

“Farming of Tilapia is not permitted in the country on

commercial basis. After studying the performance, growth and breeding performance of Tilapia in our facility, we will prepare a protocol and send it to the Centre by November,” said another RGCA official.

Some of the farmers responded by saying that India was way behind others in tilapia culture production and it was time to allow commercialisation of it on a big scale.

- The Hindu

Kerala to be export capital of ornamental fishes: Minister

Kerala would become the export capital of ornamental fishes in the country within five years, Minister for Fisheries and Registration S Sharma said following the Assembly’s recent approval to set up in the US a branch of a company formed by the government to provide the stake holders an opportunity for investment

regarded as the export hub of ornamental fishes in the country.

The minister said despite India’s size, the country’s export of ornamental fishes stood below one per cent in the international market while the much smaller Sri Lanka, has an export growth of 8%.

He said the centre and state governments launched a scheme by which a subsidy of Rs 80,000 would be given to Kudumbasree units, having five members each, that are involved in ornamental fish farming. This would ensure a monthly family income



and trade in the sector.

Kerala Aqua Ventures International Ltd (KAVIL), a company with public-private partnership, was set up in Kadungalloor near Aluva and is chaired by Chief Minister V S Achuthanandan.

Sharma, who was here to inaugurate the Rs 50 lakh Kottayam Public Aquarium, said KAVIL has been exporting ornamental fishes to Japan, Italy and France. Kerala is

of about Rs 7,000, he said.

The 200 sq feet Kottayam Public Aquarium was built on 20 cents of land with financial assistance of Rs 37.5 lakh from Rashtriya Krishi Vikas Yojana of Union Agriculture Department and Rs 12.5 lakh from Matsyafed, the Kerala State Co-operative Federation for Fisheries Development Ltd.

- PTI moneycontrol.com

Fisheries, aquaculture support 540m, says FAO

Fisheries and aquaculture support the livelihoods of an estimated 540 million people, or eight per cent of the world population, according to the Food and Agriculture Organisation (FAO).

Also, the contribution of fish to global diets has reached a record of about 17 kg per person on average, supplying over three billion people with at least 15 per cent of their average animal protein intake.

This is due to the ever-growing production of aquaculture which is set to overtake fisheries as a source of food fish, the State of the World's Fisheries and Aquaculture released by FAO said.

The report also stressed that the status of global fish stocks has not improved.

According to the report, fish products continue to be the most-traded of food commodities, worth a record \$102 billion in 2008, up nine per cent from 2007.

The overall percentage of overexploited, depleted or recovering fish stocks in the world's oceans has not dropped and is estimated to be slightly higher than in 2006. About 32 per cent of world fish stocks are estimated to be overexploited, depleted or recovering and needs to be urgently rebuilt, the report says.

On the other end of the scale, 15 per cent of the stock groups monitored by FAO were estimated to be underexploited (three per cent) or moderately exploited (12 per cent) and therefore able to produce more than their current catches.

"That there has been no improvement in the status of stocks is a matter of great concern," said senior FAO fisheries expert Richard Grainger, one of the report's editors. "The percentage of overexploitation needs to go down although at least we seem to be reaching a plateau."

The report examines the growing

legal efforts to enforce tighter controls on the fisheries sector, for example, through trade measures and against illegal, unreported and unregulated fishing.

The trade measures are meant to block entry of such fish and fish products from international trade in an effort to better manage the fisheries sector and reduce levels of overexploitation. A recent study estimates the cost of illegal and unreported fishing alone at \$10-23.5 billion per year.

The report also notes increasing debate about a proposed global record of fishing vessels, which ideally would assign a unique vessel identifier to each vessel that would remain constant regardless of ownership or flag changes over time. Such transparency would make it easier to police vessels engaged in illegal fishing activities.

The increasing demand for fish highlights the need for the sustainable management of aquatic resources. The report recommends an ecosystem approach to fisheries, which is an integrated approach for balancing societal objectives with the state of the fishery and its natural and human

environment.

Total world production of fish and fish products rose from 140 million tonnes in 2007 to 145 million tonnes in 2009, according to the FAO report. Much of the fish now comes from aquaculture, which is growing at the rate of almost seven per cent a year.

The report held up aquaculture policies in Southeast Asia - where fish is a fundamental part of people's diets - as a good example of balanced management. The report praised continuously improving government interventions built on comparative advantages and economic incentives that lead to growth, food security and better living standards.

The report contains a special chapter on inland fisheries. Inland fisheries are often overlooked by policymakers and irrigation and hydroelectric schemes are at times planned without regard for the impact on inland fishers' livelihoods. However, inland fisheries supports 61 million people worldwide.

"Fish is a good quality and high protein food and the sector contributes in an important way to world food security," said Grainger.

- thenationonline.net

U.S. Proposes Aquaculture Guidelines

The federal government on Wednesday issued the nation's first policy guidelines for aquaculture, opening the way for farm-raised seafood to be produced in federal waters as long as the operations do not threaten wild fish stocks or saltwater ecosystems.

The guidelines, by the National Oceanic and Atmospheric Administration, offer general standards that regional fishery councils will have to meet when they propose fish farms.

Aquaculture has been growing rapidly worldwide, and in 2009, farmed fish and shellfish surpassed wild-caught stocks as the major source of seafood worldwide.

NOAA estimates that 84 percent of the seafood consumed in the United States is now imported, and half of that is produced through aquaculture.

While shellfish aquaculture is common in state waters, which typically extend to three miles offshore, most fin fish farmed in the

United States are freshwater plant-eating fish like tilapia. There has been little farming of saltwater fin fish.

In 2009 NOAA allowed an aquaculture plan proposed by the Gulf of Mexico Fishery Management Council, which regulates fishing in federal waters in the gulf, to proceed. Federal officials said then that in the absence of a federal policy, they had no grounds to block it.

Officials at the National Oceanic and Atmospheric Administration said the gulf plan would be evaluated in light of the new guidelines.

Marine aquaculture operations in other countries have drawn criticism from environmentalists and researchers who say they contribute to pollution and disease among wild fish.

Opponents also noted that farmed fish like salmon typically feed on pellets made from smaller ocean fish, which contributes to declines in wild fish stocks.

In a statement, George H. Leonard, director of the aquaculture program at the Ocean Conservancy, called the draft guidelines issued Wednesday “a step in the right direction.” He said that “piecemeal aquaculture standards” like those for the gulf could undermine American efforts to produce sustainably farmed seafood.

Among other things, the guidelines recommend more research on what Eric Schwaab, NOAA’s assistant administrator for fisheries, called “alternate feeds” that would

substitute for wild fish in the diets of farmed fish and might have less of an impact on the ecosystem.

The guidelines also call for a ban on stocking fish farms with nonnative fish until it can be demonstrated that their presence will not cause “undue harm to wild species, habitats or ecosystems in the event of an escape.”

The public may comment on the aquaculture guidelines through April 11. Mr. Schwaab said he expected a final version to be adopted this year.

Noting that wild fish stocks are under threat globally, the agency said that aquaculture in the United States and abroad was likely to take a growing share in the market for fish.

- By CORNELIA DEAN, *The New York Times*

Mathsya Mela 2011 - Fish fest has buffs hooked on

It’s a virtual aqua fever out there at the “Mathsya Mela 2011,” kicked off by Chief Minister B S Yeddyurappa at the Palace Grounds here on Friday. Fish of all hues, shapes and sizes are all set to enthrall the City’s fish buffs and fish farmers over the next four days.

Organised by the Department of Fisheries to promote the fishery industry and provide a platform for fisher folk and the industry to interact, the fest is much more than the 125 stalls. The fest also has enough stuff to trigger interest among amateur hobbyists who want to set up aquariums at home.

To educate people about ornamental fish, the Fisheries Research and Info Centre, KVAFSU, has on display an array of glass bowls with varieties like black molly, spawn, sword fish and the visually enticing Singapore Guppies with their colourful patterned wavy tails.

Also featured is the Aqua Design Amano (ADA), which has been promoting its water gardens in tandem with the ‘go green’ mantra. Considered to be the latest trend in

aquarium, the Japanese technology aims at creating a complete ecosystem in fish tanks, thereby, giving the fish the feel of their natural environment. The tanks have special soil and lighting system, which helps in photosynthesis. There is also carbon dioxide system and liquid fertiliser, explained ADA managing director Adip Sajjan Raj.

While the concept was still



catching up in the country, Raj said many IT professionals in the City were acquiring aquariums as a hobby. “The maintenance of the plants is similar to what you would do in your garden. The only difference being that this is under water.

The plants require regular care, trimming, etc,” he said. However, the

cost of setting up such an aquarium could get expensive. A two-sq ft tank cost about Rs two lakh.

In another stall, oysters were being displayed to promote cultivation of fresh water mussels for pearls. Kalanjan from Indian Pearl Culture, Mumbai, enlightened curious fishermen about how they could cultivate mussels along with fish culture.

A different stall had a fish farmer from Falguni village in Chikmagalur, showing off an indigenous fish from Malnad. While the entire village adopted organic land farming, even the fish cultivation followed suit.

“Use of pesticides in farms has nearly wiped out fish. However, we are not growing it in an organic way,” he said. The fish supposedly have medicinal value, he added.

Apart from fishing equipment like nets, crates, ice box, etc, a section in the exhibition was also dedicated to accessories used in aquarium, feed seeds, aqua medicines and food items like prawn chutney, pickles, dry fish and so on.

Plans to develop 10 harbour ports

In his inaugural speech, the Chief Minister said the development of 10 harbour ports including Mangalore, Malpe, Karwar will be included in the upcoming budget.

Besides, the four per cent VAT on ice that was being imposed on export of fish would be relaxed and free boats will be provided to coastal fishermen.

A kit worth Rs 5,000 would be given to fisherwomen.

Minister for Ecology and Environment Krishna J Palemar said the government planned to develop local tanks to protect indigenous fish.

A special package will be announced for fishermen in the upcoming budget.

- DHNS:deccanherald.com

Sharat Industries' whiteleg shrimp from India earns Friend of the Sea certification

Whiteleg shrimps (*Litopenaeus Vannamei*), produced by Sharat Industries Limited have been certified as sustainable by Friend of the Sea.

The culture area of Sharat Industries is situated 900 mts away from the sea shore in Thotapalli Gudur Mandalam, Nellore Dist, and India and covers 180 ha. The *Litopenaeus Vannamei* broodstock is imported from the Oceanic Institute in America. This is done under the

supervision of the Coastal Aquaculture Authority (CAA) and according to strict regulations of the Livestock Importation Act, 2001 and Central Government guidelines. I

n the farm, no drugs or other chemicals are used during culture practice. Bio security measures such as bird control and crab fencing are in place along with the use of probiotics and a closed system of water management.

Sharat Industries Ltd., engages in aquaculture and since 1994 has been an integrated project with a shrimp hatchery, aqua farm, feed mill and processing facilities. In 2004, Sharat Industries was the first company in India to start the culture of *Litopenaeus vannamei* shrimp to overcome the problem of white spot disease that is common in *P. monodon* shrimp, in India. The company produces fresh, frozen and cooked *Litopenaeus Vannamei* shrimp.

Mr. S. Prasad Reddy, the Managing Director, said: "We are a pioneering company in India to have begun the culture of *Litopenaeus vannamei*. The Friend of the Sea certification is evidence that our farming practices are sustainable."

- fishupdate

JWG on fisheries to meet on March 28

After a gap of over five years, the Indo-Sri Lankan Joint Working Group (JWG) on fisheries will meet in New Delhi on March 28 to discuss issues of fishing in the narrow Palk Straits and the Gulf of Mannar and related problems. Apart from senior officials of the External Affairs Ministries of India and Sri Lanka, the delegations which will take part in the talks will include representatives from the Ministry of Fisheries, Ministry of Defence, the Attorney General's Department, Immigration and Armed Forces.

The meeting of the group was revived consequent to a meeting between Indian Foreign Secretary Nirupama Rao and the Sri Lankan President Mahinda Rajapaksa, in end-January. She had rushed to Colombo following the killing of two fishermen from Tamil Nadu in Sri Lankan waters. A joint statement issued at the end of Ms. Rao's visit decided to revive the Group at "an early date." The Group would also address the proposed Memorandum of Understanding on development and cooperation in the field of fisheries. "It was decided as well to enhance and promote contacts between the fishermen's associations on both sides, since such contacts have proved to be mutually beneficial," the statement had said.

India and Sri Lanka are also working on modalities for visit of delegations of fishermen from either side.

R. K. Radhakrishnan
The Hindu



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