



No. 147 October - December 2015 ISSN 0972-2386



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CMFRI Newsletter

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Inaugural function of the 5th International Symposium on Cage Aquaculture in Asia held at Kochi

see page 3



हर कदम, हर उमर
किसानों का हमसफर
भारतीय कृषि अनुसंधान परिषद

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DIRECTOR SPEAKS



Warm greetings to all.

The potential to increase marine fish production in India through sea farming is considerable although cage aquaculture in the country is still only in its early development stage. ICAR-CMFRI pioneered research in the open sea cage culture in India as well as

achieved the first breakthrough in breeding and seed production of several commercially important marine food fishes such as Cobia and Silver Pompano. R & D efforts are underway to achieve similar success in other groups such as groupers and Red snapper in the coming years. In this context, the 5th International Symposium on Cage Aquaculture in Asia hosted by the Institute witnessed many scientific deliberations which will be helpful in developing the necessary technologies. It has also come out with several recommendations that will surely aid the process of a Blue Revolution in India. The efforts of all those who strived to make the event a striking success deserve compliments. During the period, the planning for National Marine Fisheries Census 2016 with support from the Department of Animal Husbandry, Dairying and Fisheries (DAHD & F) was completed and the database compiled in specially designed forms on the socio-economic, infrastructure and other associated data from the coastal fishing villages and fishermen will be digitized. This will be invaluable during planning fisheries development schemes or policies for the country. We could also successfully collate stakeholders' opinion from various regions to aid the formulation of the new National Marine Fisheries Policy by the Union Government. As we enter the new year 2016, it is gladdening to note that the Puri Field Centre of ICAR-CMFRI has been opened, which will certainly make all efforts to fulfill the needs of marine fishermen of the region through their research out-reach and training programs. As the new year unfolds, it is time to approach our work with renewed vigour and dedication and I wish everyone a very successful New Year 2016.

A. Gopalakrishnan
Director

About CMFRI

The Central Marine Fisheries Research Institute, Kochi, is a premier research Institute under the Indian Council of Agricultural Research, devoted to research and training in marine fisheries and mariculture.

CMFRI has three Regional Centres viz., Mandapam Camp, Visakhapatnam and Veraval and seven Research Centres located along the Indian coastline, catering to the marine fishery policy needs of all maritime states of the country.



ICAR-CMFRI hosts the 5th International Symposium on Cage Aquaculture in Asia (CAA5)



Release of CAA5 Souvenir (from L-R) Dr. A. Gopalakrishnan, Dr. Alice Joan Ferrer, Dr. J. K. Jena, Dr. S. Ayyappan, Dr. Derek Staples, Prof. (Dr.) Mohan Joseph Modayil and Dr. Mridula Rajesh

ICAR-Central Marine Fisheries Research Institute and the Indian Branch of the Asian Fisheries Society (AFS) hosted the 5th International Symposium on Cage Aquaculture in Asia (CAA5) in Kochi, India during 25-28th November 2015. The inaugural function held on 25th November 2015 began with a welcome address by Dr. A. Gopalakrishnan, Convener, CAA5 and Director, ICAR-CMFRI. Invitees and delegates from India,

Norway, Indonesia, United Kingdom, Korea and Philippines were present on the occasion. He acknowledged the Asian Fisheries Society for providing the opportunity to host this prestigious event at Kochi which included a symposium theme talk, keynote address for each session and lead talks by eminent researchers and experts cage aquaculture. 252 participants from 10 countries (Norway, UK, Australia, South

Korea, Indonesia, Vietnam, Philippines, Thailand, Iran, China) were present besides Indian delegates. One symposium theme lecture, 6 keynote address, 17 lead talks, 141 abstracts, 42 oral and 75 poster presentations were made. An exhibition of cage culture technology, products and services with 21 exhibitors, had stalls displaying their products / services. Presentations in 6 different sessions pertaining to recent advances and research activities in the field of cage aquaculture were made. From over 200 submissions received, the best were summarized in the Book of Abstracts which was also released during the function. Convener CAA5 expressed his hope that the Symposium would meet the objectives and initiatives of ICAR, MPEDA, SAUs and NGOs in contributing to aquaculture growth in India and that it would provide a platform for the country to take up cage culture in a sustainable manner.

Felicitatory messages received from the Hon'ble President of India, Shri. Pranab Mukherjee, Vice President, Shri Mohammed Hameed Ansari, Union



Welcome Address by the Dr. A. Gopalakrishnan, Convener CAA5, Director, ICAR-CMFRI



*Address by the Chief Guest
Dr. S. Ayyappan, Secretary, DARE & DG, ICAR*



*Address by Guest of Honour
Prof. (Dr.) Mohan Joseph Modayil,
CAG, AFS, Malaysia*



*Presidential address by Dr. J. K. Jena,
Chairman, AFSIB and DDG (Fisheries), ICAR*

Agriculture Minister, Shri. Radha Mohan Singh, Hon. Chief Minister of Kerala, Shri. Oommen Chandy and the President, Asian Fisheries Society, Prof. Shuolin Huang who flagged the importance of the symposium were also read out.

After the Welcome address, Dr. Alice Joan Ferrer, Vice President, Asian Fisheries Society, Malaysia spoke briefly on the activities of AFS past. A two minutes silence was observed as a mark of respect to the departed souls of Dr. S. Z. Qasim, Honorary Life Member AFS, Prof. H. P. C. Shetty, Founder Chairman, AFSIB and past AFS Councillor and Mr. J. V. H. Dixitulu, former Managing Editor of Fishing Chimes.

In his Presidential address, Dr. J. K. Jena, Chairman, AFSIB emphasized the need for governmental policies to support cage farming in open waters. He said that the slogan at present was not only fish for all for today and tomorrow but also forever. He said that India could

take cues from countries such as Norway, Chile and China.

Prof. (Dr.) Mohan Joseph Modayil, Former Member, ASRB and Member Council Advisory Group (CAG), AFS, was the Guest of Honour for the function. He expressed happiness at the response shown by the participants to CAA5 and congratulated efforts to make this conference successful when cage aquaculture is still in its infancy in India. Highlighting the prospects of cage culture to a developing country like India where fish is not only an item of food but also of employment opportunities he pointed out that Asia is now emerging as a superpower in aquaculture. He flagged the issues of environmental safety, entrepreneurship, consumer health and also highlighted prospects of Asian countries to gain from cage aquaculture. He emphasized that there is no need for any competition between countries and what is rather needed is sharing of skills, knowledge and expertise with concerted

efforts of Asian countries to take ecofriendly cage culture forward.

Dr. Derek Staples, Immediate Past President, AFS, in his address stressed that the fisheries society in Asia needs to undergo a major reform with respect to connectivity among Asian countries.

The Book of Abstracts and Souvenir of the Symposium were released by the Chief Guest Dr. S. Ayyappan. In his Inaugural address he opined that it was apt that CAA5 was held in Kochi which may be rightly called the fisheries capital of India. He recounted his first experiments in freshwater cage culture along with Dr. Kumaraiah, way back in 1982. He mentioned that the food basket is getting diversified from cereals to meat to fish and the biggest challenge now is Climate Change which ICAR- CMFRI is also addressing. Highlighting the achievements made by ICAR-CMFRI in cage culture at Veraval, Karwar, Mandapam and Kochi he mentioned that present day emphasis is on environment



Address by Dr. Alice Joan Ferrer



Address by Dr. Derek Staples, Immediate Past President, AFS

friendly and sustainable practices in capture fisheries as well as aquaculture. He expressed hope that the symposium would provide an opportunity for exchange of ideas between India and Norway who are the leaders in cage culture. Today, the Indian youth is looking forward to challenging ideas and opportunities and cage culture will be such an opportunity he added. He further emphasized that multiple use of water should be resorted to and complimented the efforts of the youngsters from Jharkhand on their success in cage farming in the reservoirs. He also said that a strong combination of seed availability, feed, skill and will were the need of the hour for further development of cage aquaculture in India. Stressing that cage culture can provide opportunity for a paradigm shift for production of food from land to water bodies, Dr. Ayyappan concluded his address by wishing the delegates fruitful deliberations.

The AFSIB R & D Innovation Awards were presented to experts who had significantly contributed for the development of cage culture in India. This included Mr. Sanjay V. Raut, President (Technical & New Businesses), Garware-Wall Ropes Limited, Pune, Dr. Thampi Samraj, Director, Rajiv Gandhi Centre for Aquaculture, MPEDA, Kochi, Prof. (Dr.) Mohan Joseph Modayil, Former Member, ASRB and Former Director, ICAR-CMFRI, Dr. G. Syda Rao, Former Director, ICAR-CMFRI, Dr. G. Gopakumar, Emeritus Scientist, ICAR-CMFRI and Dr. P. Kumaraiah, former Principal Scientist, ICAR-CIFA. Dr. Mridula Rajesh, Treasurer, AFSIB proposed the vote of thanks.

Distinguished guests at the symposium included Dr. V. V. Sugunan and Dr. Madan Mohan (Former ADGs (Fisheries), ICAR), Dr. P. S. B. R. James, Dr. V. N. Pillai (Former Directors, CMFRI), Dr. S. D. Tripathi (Former

Director, ICAR-CIFE), Dr. S. W. A Naqvi, Director, CSIR-NIO, Goa; Dr. P. Ravishankar, Director, ICAR-CIFT, Dr. K. K. Vijayan, Director, ICAR-CIBA, Chennai and Dr. P. Jayasankar, Director, ICAR-CIFA, Bhubaneswar besides many other eminent personalities in the field of fisheries and aquaculture.

The Symposium Theme lecture "Greening the Asian Cage Aquaculture Construct" was delivered by Prof. (Dr.) Mohan Joseph Modayil. The keynote speakers were Mr. Trond Severinsen (Norway) (Marine Production Systems), Dr. V. V. Sugunan (Inland Production Systems), Dr. G. Gopakumar (Breeding and Seed Production), Dr. P. E. Vijay Anand, USSC (Nutrition and Feed), Dr. Brit Hjeltnes, (Norway) (Health and Environment Management), and Dr. Marius Dalen, (Norway) (Economics, Livelihood and Policies). All sessions had lead talks by eminent speakers and scientists from different organisations in India and abroad. They were Dr. Niels Svennevig (Vietnam), Dr. Clive Jones (Australia), Dr. K. G. Padmakumar (India), Dr. A. K. Das (India), Mr. Uttam Kumar Subuddhi, IFS (India), Dr. Asmund Bjordal, Director, IMR (Norway), Dr. Ketut Sugama (Indonesia), Dr. Kristoffer Lunde, EWOS (Norway), Prof. Trevor Platt (Plymouth, presently Jawaharlal Nehru Science Fellow, India), Dr. K. K. Vijayan, Director, ICAR-CIBA (India), Dr. Indrani Karunasagar (India), Dr. Murwantoko (Department of Fisheries, Faculty of Agriculture (Indonesia), Dr. P. Ravichandran, Member Secretary, Coastal Aquaculture Authority, (India), Mr. Suresh Kumar, DGM, NABARD, (India) and Mr. Jacob Joseph, Asst. Professor, NUALS, (India). There were oral and poster presentation in each session by scientists and students from different organisations in India and abroad. The Exhibition and Trade show inaugurated by Dr. Derek Staples, AFS (Malaysia) had 22 stalls which included



Keynote address by Prof. Trevor Platt in Session I on Marine Production Systems



Keynote address by Mr. Trond Severinsen (Norway) in Session I on Marine Production Systems



Lead lecture by Dr. Asmund Bjordal (Director, Institute of Marine Research, Norway) in Session III



Lead lecture by Dr. Ketut Sugama (Indonesia) in Session III on Breeding and Seed Production

State and Central Government Agencies, ICAR institutes, Fisheries Universities, Entrepreneurs, Banks and NGOs.

The Plenary and valedictory session of CAA5 was held on 27th November, 2015. After the welcome address by Dr. B. Shamasunder, Secretary AFSIB, Dr. S. D. Tripathi, Dr. K. K. Philipose, Coordinator, All India Network Project



Delegates at the Symposium



Lead lecture by Dr. Kristoffer Lunde (Norway) in Session IV on Nutrition and Feed



Keynote address by Dr. Brit Hjeltnes (Norway) in Session V on Health and Environment Management



Keynote address by Dr. Marius Dalen (Norway) in session VI on Economics, Livelihood and Policies

(Mariculture), Dr. Imelda Joseph, Head in Charge, Mariculture Division, ICAR-CMFRI and Dr. Derek Staples, expressed their views about the Symposium and appreciated the success of the symposium. Dr. J. K. Jena, President, AFSIB presented the concluding remarks and the recommendations of the symposium. Prof. (Dr.) Mohan Joseph Modayil announced the awards for the best three papers and posters. MATSYAFED Kerala was presented with an award in recognition of their support to the cage culture programmes in the country by supplying the nets at nominal rates to the fishers. Mr. V. Dinakaran, Chairman, MATSYAFED and Ex-MLA, on receiving the award, stated that the organization will continue supporting ICAR-CMFRI in their cage culture endeavours. The program concluded with the vote of thanks by Dr. A. Gopalakrishnan, Director, ICAR-CMFRI and Convener, CAA5.



Presentation of AFSIB R&D Innovation Award to Prof. Dr. Mohan Joseph Modayil



Presentation of AFSIB R&D Innovation Award to M/s. Garware Wall Ropes Ltd.



Presentation of AFSIB R&D Innovation Award to Dr. G. Gopakumar



Presentation of AFSIB R&D Innovation Award to Dr. P. Kumaraiah



Presentation of Award to Mr. V. Dinakaran, Chairman, MATSYAFED



Inauguration of Trade Show by Dr. Derek Staples



Visit to CMFRI stall by Dr. S. Ayyappan, DG, ICAR



Award for best paper presentation to Dr. G. Grinson and Team

Recommendations of CAA5

Considering the emerging importance of cage aquaculture on the economy and life of the Asian region, the CAA5 recommends

1. A precautionary development agenda for environment and resource friendly, sustainable and inclusive way forward for Asian countries by sharing information and experiences for the benefit of all.
2. Collective efforts between Asian countries to foster a green approach by following best management practices for providing safe fish.
3. Development of breeding and grow-out technologies of indigenous candidate species, specific to each country, with emphasis on diversification in both inland and marine cage aquaculture.
4. Greater focused research attention on feed development, with emphasis on reduced use of fish meal and fish oil, and feed management approach for prospective candidate species for cage aquaculture in the Asian region.
5. Development and implementation of countryspecific disease surveillance and management plans for addressing existing diseases and preventing future outbreaks.
6. A greater thrust on R & D on multispecies farming; involving fish, molluscs, seaweeds and scavengers for utilization of multi-trophic food niches for preventing environmental deterioration.
7. Development and adoption of National policies for each country, taking into consideration harmonized approaches delineating maximum biomass production for sites in inland and marine water bodies, so as to prevent adverse impacts on the aquatic environment of neighbouring countries.
8. Mapping of sites for cage aquaculture, taking into consideration local area development plans, environmental safeguards and user rights; further, notifying and demarcating culture sites must receive attention in each country so as to promote harmonious development.
9. Facilitation of private-public participation in commercial cage farming to attract increased investment and entrepreneurial development.
10. Sharing of knowledge and skill for development of cage aquaculture through collaborative programmes in research, training and human resource development.



Award for best paper presentation to Dr. M. K. Anil and Team



Award for best poster presentation to Dr. K. Madhu and Team



Award for best poster presentation to Dr. P. A. Vikas and Team



CAA5 Core Committee from ICAR-CMFRI with Dr. A. Gopalakrishnan, Convenor, CAA5.



Delegates at the National Marine Biodiversity Museum, ICAR-CMFRI



Delegates at the Dinner hosted at CMFRI as part of CAA5



Dr. A. Gopalakrishnan, Director with the invited speakers and the AFS and AFSIB team at ICAR-CMFRI



Dr. B. Shamasundar, Secretary AFSIB speaks at Valedictory function



Session in progress



Dr. Asmund Bjordal presents memento to Dr. A. Gopalakrishnan during the Valedictory Function



View of the Audience



'Cage Aquaculture Aiming Sky High' - Symposium Theme Painting by Shri. K. M. David



Logo and Website Team : Shri. P. R. Abhilash, Shri. K. M. David and Shri. Manu V. K.



Glimpses of the Cultural Evening



Host Institute of ICAR-CMFRI

**Asian Fisheries Society (AFS)
ICAR-Central Marine Fisheries Research Institute (CMFRI) &
Asian Fisheries Society Indian Branch (AFSIB)**
announce



5th International Symposium on Cage Aquaculture in Asia CAA5

November 25-28, 2015, Kochi, Kerala, India



*Dr. A. Gopalakrishnan, CAA5 Convener & the Organizing Team from ICAR-CMFRI
with Dr. J. K. Jena, Chairman, AFSIB and Prof. (Dr.) Mohan Joseph Modayil
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CMFRI Newsletter

Cadalmin, the CMFRI Newsletter is a quarterly publication of the Central Marine Fisheries Research Institute, Kochi. The publication gives an insight into the major events of the quarter, besides highlighting the salient findings in the research front and dissemination of technological know-how to the farming community.