



## Register for the 11th Asian Fisheries and Aquaculture Forum and GAF6

The 11th Asian Fisheries and Aquaculture Forum will be held from 3-7 August 2016 in Bangkok, Thailand. The meeting provides an international platform for distinguished scientists from all over the world to discuss issues pertaining to sustainable fisheries and aquaculture in the Asia-Pacific Region. The forum will be convened in conjunction with the ASEAN Fisheries and Aquaculture Conference and Exposition 2016. Both events will be held in Bangkok International Trade and Exhibition Center.

The forum and exposition are jointly organised by the Department of Fisheries, Thailand, in collaboration with the Asian Fisheries Society, Food and Agriculture Organisation of the United Nations Regional Office for the Asia and the Pacific, GLOBEFISH, INFOFISH, the Network of Aquaculture Centres in the Asia-Pacific, and the Southeast Asian Fisheries Development Center.

### Format and programme

Invited speakers from around the world will share their experiences and lessons-learned in fisheries and aquaculture. Participants from all over Asia and elsewhere will showcase recent advances in fisheries and aquaculture research and development in Asia.

The programme will run for three days with a welcome reception on 4 August 2016. It will include:

- Thematic plenary sessions with distinguished speakers from the fisheries and aquaculture community.
- Thematic concurrent sessions with presentations selected from individually contributed abstracts.
- Poster presentations and a poster competition.
- The concurrent ASEAN Fisheries and Aquaculture Conference and Exposition 2016.

### Forum theme and thematic sessions

The theme of the 11th AFAC is "ASEAN Seafood for the World & Asian Food Security for the World". Presentations and discussion will be organised into six themes plus a parallel gender symposium as follows:

**Theme 1: Governance:** To include legal/policy frameworks, institutional structures and arrangements, planning and compliance for both aquaculture and capture fisheries.

**Theme 2: Education and training:** To include recommendations from the recent International Symposium on Aquaculture and Fisheries Education (ISAFE2), education and training needs in Asia, innovative and new education and knowledge exchange.

**Theme 3: Sustainable intensification of aquaculture:** To include CAA5 outcomes and recommendations, feeds & nutrition (especially fish meal issues), breeding & genetic selection, GMOs, hatchery technology, responsible aquaculture (environment), social and economic dimensions, disease management, DAA overview and biotechnology.

**Theme 4: Response to impacts of climate change:** To include impacts and responses to climate change in both aquaculture and fisheries and biodiversity, building resilience of fishing/aquaculture stakeholders and disaster management.

**Theme 5: Sustainable fisheries:** To include both small scale artisanal and large scale industrial marine and inland fisheries stock enhancement (including culture-based fisheries, biology and ecology of target species, stock status, management, social/economic considerations and major issues including IUU fishing, by-catch and subsidies.

**Theme 6: Seafood, post-harvest technology & food safety:** Processing, products, biotechnology, food safety standards, compliance and certification.

**6th Global Symposium on Gender in Aquaculture and Fisheries:** To include promoting gender equality in the aquaculture and fisheries value chain, understanding the roles of women in aquaculture and capture fisheries, and social and economic issues concerned with fairness and responsibility.

### ASEAN Fisheries Exposition

The Forum Marketplace will provide a networking hub where participants can rent a stall or table to display publications, make known their organisation, promote specific projects, exchange proposals and generally make contacts:

- Exposition area 7,750 m<sup>2</sup> with 450 booths (3x3 m).
- More than 10,000 visitors are expected.
- Targeting exhibitors from international fish producers, traders, processors, and equipment suppliers, as well as food service and catering operators.
- Meeting with ASEAN local producers and SMEs.

## Registration

Please register your attendance at the forum via the conference website, which also provides guidance on accommodation, transportation and the venue:

<http://www.enaca.org/modules/afaf/welcome.php>

## Key dates

Date	Event
15 October 2015	Marketplace applications open
15 November 2015	Registration / abstracts open
15 April 2016	Abstract submission closes
30 April 2016	Abstract submitters notified
2 June 2016	Regular registration starts
2 August 2016	Final program distributed
3 August 2016	Registration desk opens (PM)
4 August 2016	Exposition and Forum begin
6 August 2016	Last day of Exposition and Forum
7 August 2016	Post-forum tours and departure

For more information, please contact:

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## 6th Global Symposium on Gender in Aquaculture and Fisheries (GAF6)

**Special Symposium at the 11th Asian Fisheries and Aquaculture Forum, Bangkok, Thailand  
3-7 August 2016, Bangkok International Trade and Exhibition Center (BITEC)**

The special symposium aims to increase the profile of women in aquaculture and fisheries, as well as to increase capacity for gender research and the implementation of gender policy. This year the symposium theme of "Engendering security in fisheries and aquaculture" reflects the multiple facets of security for people in fish supply chains, including the food security theme of the Asian Fisheries and Aquaculture Forum. It goes well beyond food security, however, and broadens the security theme to include other important and connected aspects that impact women and men in fish supply chains, such as access to natural resources, fair livelihoods, environment, natural and climate change related disasters, and domestic violence.

Symposium sessions will vary in format, according to their content and purpose. GAF6 will have opportunities for oral and poster presentations, as well as short workshops, panels and events to stimulate networking. Students are encouraged to participate. The symposium aims to promote interactions between grassroots groups, participants from industry, researchers and educators.

### Symposium themes

The symposium will include:

- Special workshop on the implementation of the gender elements of the Voluntary Guidelines on Small-scale Fisheries.

- A proposed "GAF 101" training workshop.
- A panel and networking session on the fish industry, gender and social development.
- Session on regional updates on gender in fisheries and aquaculture.
- Session on gender in fish trade and value chains.
- Session on GAF in Thailand and the Mekong region.
- Competition on "youth and fish".
- Oral and poster sessions on fishing communities and wellbeing, including violence against women; climate change and disease preparedness; thinking beyond the framework of gender and fisheries; gender and food safety; putting gender integration ideas into action.

The first formal meeting of the GAF Network will also be held. Come and join us! For more information including programme updates please see the Gender in Aquaculture and Fisheries website:

<https://genderaquafish.org/>.

# Global Conference on Climate Change Adaptation for Fisheries and Aquaculture

8-10 August 2016, Bangkok, Thailand

A global conference is being convened to provide participants the opportunity to share their practical experiences in understanding vulnerabilities associated with climate change and in identifying, prioritising and implementing adaptation and disaster risk management actions within the fisheries and aquaculture sector and dependent communities.

Worldwide, over 600 million people depend, directly or indirectly, on fisheries and aquaculture for their livelihoods. Fish provides essential nutrition for over 4 billion people and at least 50 percent of animal protein and essential minerals to 400 million people in the poorest countries. Trade in fish and fisheries products is also important for societies and economies: fish products are among the most widely-traded foods, with more than 37 percent by volume of world production traded internationally. Yet, the fisheries and aquaculture sectors are facing many issues, such as over-fishing, habitat degradation and pollution, and climate change and variability have the potential to compound existing pressures on the sector, but can also provide opportunities.

Climate variability and change is already affecting aquatic systems' physical, chemical and biological processes - potentially resulting in changes in fish life cycles, habitats, species compositions, distributions or abundance, which can impact fisheries management, livelihoods, food security and sustainable development. Sea level rise and extreme climate events can also have direct impacts on fishing operations and safety-at-sea as well as on the physical infrastructure of coastal communities and communities along rivers and lakes; destroying or severely damaging assets such as boats, landing sites, post-harvesting facilities and roads. Displacement of populations due to high-dam construction is also an issue. There may also be positive opportunities in fisheries associated with locally improved ecosystem and productivity conditions and in aquaculture with sea level rise and expansion opportunities in salinised coastal margins, or with better temperature conditions for local stocks.

Fisheries- and aquaculture-dependent economies, coastal communities and fishers and fishfarmers are expected to experience direct effects of climate change in a variety of ways, such as increased risks of human diseases (malaria, cholera, etc) relating to increased temperatures and displacement and migration of human populations from low-lying areas to less risky areas or to follow changes in fish distributions. One must note that many fishing (both inland and marine) and coastal communities already subsist in precarious and vulnerable conditions because of poverty and rural underdevelopment, with their well-being often undermined by overexploitation of fishery resources, degraded ecosystems and water scarcity. Fisheries and aquaculture-dependent communities often lack ability to anticipate and adapt to climate change and variability and hence they tend to be among the most vulnerable. Climate variability and change can exacerbate food insecurity in areas currently vulnerable to hunger and malnutrition.

## FishAdapt: Sharing practical experiences in climate change adaptation in fisheries and aquaculture

Much can be done at the household, community and sector levels to support the resilience of the sector in a changing climate. For example, fisheries and aquaculture-dependent communities can receive targeted and improved weather and extreme event information, as well as safety of fishing vessels and fishers while at out fishing. The sector can also be supported to improve its monitoring and analysis of local changes and to have access to global information. Other adaptation options include social protection and livelihood diversification as well as support to exit from the sector when needed. Fishing and fish-farming methods and zones can be adapted to the change that is likely to occur and post-harvest processes can be improved to adjust to changing species and to minimise losses due to temperature-related spoilage and disease risks. The adaptive capacity of the aquatic ecosystems can also be improved, such as through implementing the ecosystem approach to fisheries and aquaculture, using natural defences to erosion and storms and minimising negative impacts of harmful fishing and farming activities to support the general resilience of the ecosystems supporting the sector.

Fisheries and aquaculture systems and communities can also be provided with important enabling environments, such as through secure tenure and access rights to the natural resources upon which they depend. Policy makers and managers can implement adaptive fisheries co-management plans, legislate vulnerability assessments within the sector and ensure that management, development and trade strategies and policies are climate and disaster-proofed. It is also essential to ensure that the needs of the sector are included in broader national and regional climate change discussions and that adaptation and mitigation measures in one sector do not negatively affect food security and livelihoods in other sectors, such as fisheries, through reduced water flows or hard irrigation infrastructure impacting aquatic habitats.

FishAdapt will provide the opportunity to share practical experiences in understanding vulnerabilities and in identifying, prioritising and implementing adaptation and disaster risk management actions. The focus will be on applied vulnerability assessments and on case studies focusing on real-life community impacts. The conference will be the occasion to showcase adaptation planning and implementation activities that work toward building the resilience of livelihoods, governance frameworks, climate and disaster-proofing development strategies, providing technical and process-based actions, as well as reducing the vulnerability context within regions, countries, sectors and dependent communities and throughout the value chains.

## Goals and format

Through a series of panels and presentations, collaborative problem solving, interactive workshop events, discussion spaces, participants will exchange experiences and create

ideas and best practices on which to act to assist the sector in furthering its efforts to reduce vulnerability and improve resilience to climate variability and change. The conference will:

- Provide countries, fisheries and aquaculture institutions and networks, civil society, private sector, development partners, and academic institutions the opportunity to present their work in fisheries and aquaculture climate change adaptation and disaster risk management.
- Foster the exchange of information and experiences from case studies and projects which aim to show how climate change adaptation in fisheries and aquaculture and disaster risk management may be implemented in different regional and ecosystem settings among fishers, farmers, value chains and dependent communities.
- Disseminate the wealth of experiences shared through conference proceedings, which will include selected conferences papers.
- Inputs from the Conference will support the development of policy briefs to inform policy makers on best practices on climate change adaptation and risk management.
- Increase awareness of United Nations Framework Convention on Climate Change (UNFCCC) processes and inform on how efforts may be communicated to the UNFCCC through, for example, the Nairobi Work Plan, the UNFCCC Least Developed Countries Expert Group and the UNFCCC Adaptation Committee activities.

### Call for abstracts and posters!

Participants are invited to share your experiences in supporting climate change adaptation within fisheries and aquaculture among the following themes:

- Applied experiences in Freshwater, Coastal or Marine Fisheries and Aquaculture.
- Linking global, regional and national climate change and disaster risk management processes to fisheries and aquaculture

- Communicating climate change issues and potential impacts to policy makers, fishers, farmers, fishworkers, scientist, development partners, industry and others for effective planning, implementation, and monitoring.

Please see the guidelines to authors on the conference website for more detail about the conference themes and preparation of submissions.

### Call for special sessions!

The FishAdapt Conference Committee invites you to submit proposals for special sessions to delve more deeply into areas you feel should be discussed, such as water management, gender, or migration. Alternative formats for special sessions such as panels, workshops, marketplaces and facilitated and interactive sessions are welcome.

To organise a special session please submit a proposal to [climate@enaca.org](mailto:climate@enaca.org) including the title, aim and scope of the session, along with the names, affiliations and short bios of the organisers. The proposal can include additional details such as a list of potential contributors and the format of the session. An abstract is required for everyone wishing to organise a special session.

### Back to back with the 11th Asian Fisheries and Aquaculture Forum!

FishAdapt will be held just after the 11th Asian Fisheries and Aquaculture Forum and the 6th Global Symposium on Gender in Aquaculture and Fisheries, which will be held in Bangkok from 3-7 August.

### Registration and further information

For more information please see the conference website, which provides guidance on registration, accommodation and visa arrangements, or email [climate@enaca.org](mailto:climate@enaca.org):

<http://www.fishadapt.com>

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## A Review of women's access to fish in small-scale fisheries

**Angela Lentisco and Robert U., Lee (2015).**  
*Fisheries and Aquaculture Circular No. 1098. Rome, Italy.*

Women play a critical role in every link of the value chain in small-scale fisheries, although their best-known roles are in processing and marketing of fish and other fishery products. This perception of the highly gender-segregated division of labour (men fishing / women processing) has shaped the generalised approach in supporting development initiatives for small-scale fisheries. More often than not, this approach targets men as fishers, and women as processors and marketers of fishery products. However, this generalisation has also made fisheries governance blind to women's other

valuable inputs to the sector. In fact, their roles can and should go beyond postharvest and marketing. However, the lack of utilisation of their additional contribution has deterred, for example, women's participation in fisheries resource management and policy decision-making.

The present review aims to move policy attention beyond the generalised, and perhaps limited, perception of women as fish processors and marketers and in this way enhance their participation in fisheries resource management and decision-

making. The study describes the different ways women have access to fish in small-scale fisheries: as primary users (when they fish by themselves or they finance fishery operations), secondary users (when they access fish through kinship or other close relationships), and tertiary users (when they use capital to buy fish directly from fishers or traders). The review provides case studies to illustrate some of the issues that tend to keep women in marginalised positions along the value chain. Factors and processes that can contribute to improve women's participation and decision-making in small-scale fisheries, such as those that challenge conventional approaches based on traditional or "typical" gender roles and obsolete institutional arrangements, are also given. The document also discusses how participation can be improved by raising awareness on gender equality issues along the value chain through applying a gender lens, by providing appropriate support to women's organisations, including formal recognition of their professional activities, by understanding the socioeconomic context and the particular needs of small-scale fisheries, by giving due attention to power and power relationships, and by taking greater account of the contribution of women in fisheries. As neither women nor men form homogenous groups, the challenge is even greater for women to have access to productive tools and services, which if secured can give them a greater say and control over fisheries resources, thereby increasing their social capital and financial capital. These reflections can be introduced in existing resource management arrangements such as co-management or community based management, and can probably empower women and improve their participation in fishery resource management decision-making.

The reflections in this review can and should be used as guidance and discussion material to develop interventions under the Global Assistance Programme in support of the implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication.



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SMALL-SCALE FISHERIES



Free download from the FAO website at:

<http://www.fao.org/publications/card/en/c/0ae87da2-2a75-4b2f-9717-0f4f753b47bd/>

## Aquaculture operations in floating HDPE cages: a field handbook

Cardia, F. & Lovatelli, A. 2015.

FAO Fisheries and Aquaculture Technical Paper No. 593. Rome, FAO. 152 pp.

Global aquaculture production has been steadily growing in recent decades, increasingly contributing fish and other edible aquatic organisms of commercial importance entering national, regional and international markets. The growing demand for such products has stimulated the development and expansion of aquaculture production systems both on land and in all waterbodies, covering technologies ranging from the production of seed material to on-growing structures and other farming support facilities.

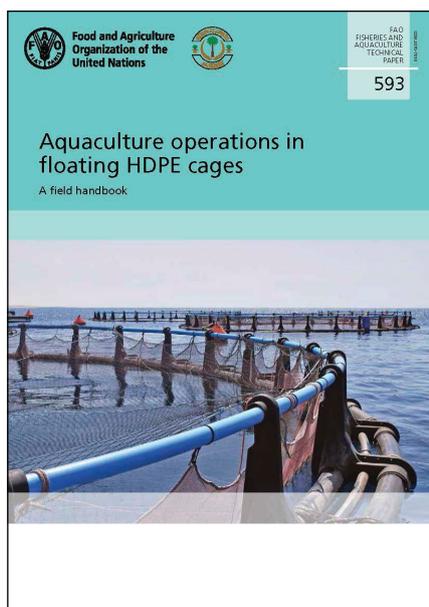
In recent decades, the aquaculture industry has also intensified its production output per unit area of space or volume, mainly to compensate, among other things, for the growing competition for land and water surfaces for other uses. The expansion of fish farming in the sea, also referred to as "mariculture", has happened as a result of several supporting factors. These include the acquisition of reproduction and

on-growing technologies for species of interest, and the development of physical structures to contain the cultured organisms. Modern marine cages, whether floating or submersible, represent one such development. These have evolved significantly from basic and rudimentary systems to sophisticated and carefully engineered structures.

Many cage designs and models have been developed and are commercially available. Among these, high-density polyethylene (HDPE) cages are widely used, because of the versatility of the materials used, the relative simplicity in the performance of the various farming operations, and the comparatively limited investment capital required. Technological improvements of HDPE cages are evolving with the availability of new materials and the various equipment items needed to service all farming operations. This manual focuses on technical aspects of HDPE cages; however, the

introductory chapter covers the importance of proper site selection in terms of site exposure and environmental parameters that affect the well-being of the culture fish and affect farm structures. Proper siting of a cage farm is of paramount importance with regard to the overall technical and economic success of the commercial operation, and for reducing as far as possible the environmental footprint of the farm.

Prior to describing the characteristics of HDPE cages and elements making up a culture unit, the handbook describes the grid and mooring systems that support the fish cages. Information is provided on the components of the two systems, their technical specifications in relation to farm size as well as on-land assembling and sea installation procedures. A chapter focuses on the floating collar of the cage, describing the components that make up this key farming structure. The technical specifications and design options are provided for the key elements of the collar readily enabling the construction of structures that meet the needs of the operator and are suitable for the environment in which they will be placed. Technical information is then provided on the ropes, netting and net cage design and on determining the appropriate size and shape. Based on procedures developed over years of field experience, practical information on collar and net installation, net changing, maintenance and inspections technique is provided.



The final sections of this publication covers practical procedures related to the stocking of cages with seed material, feeding and managing the fish stock, as well as practical information on pre-harvesting and harvesting methods, fish handling and transportation. Some information is also provided on farm safety procedures, highlighting the potential risks when working on a cage farm either on the floating structures or underwater.

Free download from the FAO website:

<http://www.fao.org/publications/card/en/c/1f660b40-dd28-4c4d-b52f-e4996532d6c3/>

## Aquaculture seed and feed production and management in Bangladesh: Status, issues and constraints

This document presents the findings of the Food and Agriculture Organization of the United Nations (FAO) Technical Cooperation Programme Facility (TCPF) Project (TCP/BGD/3301) "Identification and understanding of key technical, economic and social constraints to seed and feed production and management in Bangladesh". The project was initiated by national field surveys to investigate the status and constraints of the aquaculture seed and aquafeed subsectors, followed by field and verification missions including in-depth unstructured interviews and focus-group discussions with the different players in the seed and feed supply chain, by site

visits to projects, facilities and farms in several aquaculture-rich districts of the country and through the holding of a stakeholders' workshop. Together, these activities identified the key technical, economic and social constraints hindering the development of the aquaculture seed and feed production and management subsectors in Bangladesh. They also provided recommendations related to improving the four key areas of improved seed quality, improved aquafeed quality, strengthened capacities of farmers to utilise feed efficiently, and increased technical efficiencies of small-scale aquafeed producers.



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NACA is a network composed of  
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This publication presents (i) a synthesis of the project's major findings, including the conclusions and recommendations of the field surveys, FAO country field mission and the verification mission (including the stakeholders' workshop); (ii) reports of the field surveys and (iii) the reports of the verification mission. The recommendations contained in this document should lead to a sustained improvement in the technical and economic efficiencies of the main players in the aquaculture seed and aquafeed subsectors in Bangladesh, from the raw material suppliers to the farmers. This is expected to improve their productivity and economic returns and assure the sustainable growth of the country's aquaculture sector.

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