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ABSTRACTS



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Abstracts

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Concurrent Session I

History and experiences with **customary tenure rights and Indigenous Peoples tenure rights in fisheries**

Session Date: Monday 10 September 2018

Name: Liseth Escobar Aucu

Presenter Title: Gobernanza pesquera y pueblos indígenas de la Amazonia: Desafíos en tiempos de crisis ambiental

La pesca es una de las principales fuentes de alimento para las poblaciones ribereñas de la cuenca Amazónica, especialmente para las poblaciones étnicas que habitan en esta importante región. En la Amazonia colombiana, la pesca tiene un importante papel en la economía de los pueblos indígenas, pues gran parte de sus ingresos dependen de ella. A esto se suma la importancia de la pesca en las relaciones sociales y culturales que caracterizan a estas poblaciones. Durante muchos años, los pueblos indígenas de la Amazonia Colombiana han realizado la pesca de manera sostenible, gracias al conocimiento ancestral heredado generacionalmente, y que permitía realizar la pesca de manera artesanal, exclusivamente para el autoconsumo. Sin embargo, a través del tiempo, fenómenos como la urbanización, el crecimiento poblacional y el aumento en los niveles de captura, sumado a los cambios en las formas de organización social de los pueblos indígenas, han afectado la sostenibilidad pesquera. El presente caso de estudio expone la historia de la pesca artesanal en un resguardo indígena de la Amazonia Colombiana, localizado en la frontera con Perú. Se analiza cómo ha cambiado la actividad pesquera en los últimos 60 años, identificando las causas de la actual crisis pesquera y los esfuerzos de la población local por mantener la sostenibilidad. Se evidencia cómo en los últimos 25 años el Estado ha fomentado la creación de acuerdos institucionales para el ordenamiento pesquero, y cómo el sector privado representado por ONGs, se ha sumado a esta iniciativa. Finalmente, se muestra cómo la implementación de acuerdos institucionales, ha llevado a que los derechos consuetudinarios de pesca determinen en menor medida el ordenamiento pesquero. Se realizan recomendaciones para mejorar las estrategias para la pesca sostenible y promover los derechos de tenencia de la pesca de las poblaciones indígenas.

Session Date: Monday 10 September 2018

Presentation Title: Recognition of Aboriginal Rights to Fish in Canada

Presenter: Paul Macgillivray

This document describes recent developments in the recognition of aboriginal rights to fish in Canada, in particular how First Nations have utilized the Canadian constitution and domestic law to achieve greater security of access to fisheries resources. Canada's constitution recognizes and affirms "existing aboriginal and treaty rights of aboriginal peoples ..." The nature and scope of aboriginal fishing rights in Canada is evolving through the negotiation of modern treaties and through litigation. The fundamental objective of the modern law of aboriginal and treaty rights is the reconciliation of aboriginal peoples and non-aboriginal peoples and their respective claims, interests and ambitions. In 1990, the Supreme Court of Canada found that a First Nation group on Canada's Pacific coast has an aboriginal right to fish for food, social and ceremonial purposes and that the right takes priority, after conservation, over other harvesters. The Government of Canada responded to this court decision by extending the aboriginal priority to fish for food, social and ceremonial purposes to other First Nations. In a more recent case, Canada's courts found that five First Nations on Canada's Pacific coast hold an aboriginal right to fish within their territories and to sell that fish. As a result of that 2009 judgment, the five First Nations strengthened their aboriginal fishing rights, increased their access to fish for economic purposes and gained the flexibility to have small-scale local fisheries as an alternative to participating in the general commercial fishery. A second phase of the trail concluded in 2018 and helped to clarify the right by providing guidance on how much fish is needed to accommodate the commercial right, how the First Nations' commercial fisheries can be conducted and the priority of the First Nations' commercial fishery relative to other harvesters.

Session Date: Monday 10 September 2018

Presentation Title: Pesca Artesanal de los Pueblos Indígenas Kaqchikel y Tz'utujil en el Lago Atitlán: Un Acercamiento a los Derechos de Tenencia del Sector Pesquero en San Juan la Laguna, Sololá

Presenter: Andrés Muñoz

El país de Guatemala se encuentra ubicado en el corazón de la civilización maya, en la actualidad se pueden encontrar 23 diferentes pueblos mayas. Uno de ellos es el pueblo maya Tz'utujil, ubicado a las orillas del Lago de Atitlán, Sololá. La actividad pesquera en el Lago de Atitlán es uno de los principales medios de vida de muchos habitantes mayas Tz'utujil de Santiago Atitlán, uno de los municipios que rodean este icónico lago de Guatemala. Los derechos de tenencia de la pesca en este lugar son principalmente derechos indígenas consuetudinarios. El Estado de Guatemala, por medio de la Ley General de Pesca y Acuicultura, menciona que todos los recursos naturales de la nación, entre ellos los recursos pesqueros, son patrimonio nacional y que por medio de un enfoque de desarrollo sostenible, responsable, equitativo y democrático; el mismo debe de ser accesible para todos los guatemaltecos sin distinción, privilegio ni exclusividad. En este estudio de caso me gustaría mencionar acerca de la ineficiencia del Estado en proveer un manejo/ordenación pesquera sostenible en el área del Lago de Atitlán y las medidas de organización comunitaria por parte de algunos pescadores ante esta problemática. La creación del "Comité de Pescadores de Santiago Atitlán" es un ejemplo de la organización comunitaria con el objetivo de mejorar la gobernanza y manejo de los recursos pesqueros de los que dependen ellos y sus familias. Las actividades pesqueras en esta localidad son desarrolladas por hombres (faenas de pesca) y mujeres (comercialización de los productos). Mejorar la gobernanza de la tenencia de los recursos pesqueros en estas áreas es de principal importancia para la seguridad y soberanía alimentaria de los pueblos indígenas de Guatemala.

Session Date: Monday 10 September 2018

Presentation Title: Formalizing community-based fisheries management, challenges and opportunity: A case from Selayar, South Sulawesi, Indonesia

Presenter: Dedi Adhuri

This paper will discuss the challenges and opportunity of formalizing community-based fisheries management in two villages in Selayar District, South Sulawesi, Indonesia. The paper will show that the tradition and interest of community to protect coastal water and resources for their life and livelihoods provide strong incentive to establish and strengthen their fisheries management practices in the form of village law. Nonetheless, although some laws and regulations supported this initiative, district government hesitate to fully support it due to the fact that by the Law No 23/2014, the authority of managing coastal water is at the provincial government. This paper will look at some strategies to deal with this challenge so the formalization of the community-based fisheries management can be materialized.

Session Date: Monday 10 September 2018

Presentation Title: From customary rights to co-management in Aceh

Presenter: Helga Josupeit on behalf of John Kurien

After the tsunami, traditional rights were wiped out in Aceh Province, Indonesia. As part of post-tsunami efforts during 2007-2010 FAO and the US Red Cross tried to recover the knowledge of traditional user rights. The program covered 160 villages along 300 kms of coastline of the west coast of the Province. The key effort was to move the small-scale fishery from a custom driven to a co-managed one through an elaborate participatory process. The initiative was a collaborative effort of the Food and Agriculture Organisations of the United Nations (FAO) and the American Red Cross (ARC) – hereafter referred to as ‘the Program’.

Session Date: Monday 10 September 2018

Presentation Title: Sustainability of the indigenous fishing communities of the Bermejo River (Salta, Argentina): towards the need to improve the legal framework and governance conditions to guarantee tenure and fishing rights

Presenter: Claudio Baigun

The Bermejo basin (Argentina) supports valuable artisanal fisheries that are developed exclusively by indigenous ethnic groups and for whom fishing represents an ancestral customary practice to guarantee food security. The management of fishing under the current conditions, however, does not allow fishers to obtain the necessary social and economic benefits due to the fact that the activity is considered only as a palliative to reduce the poverty that afflicts the indigenous communities rather than as a way of life that allows these communities to gradually improve their standard of living. The fishing law works on a stereotype and typification of negative discrimination against the indigenous populations to which they are classified as subsistence fishers and not artisanal. This misperception strongly limits fishing quotas, prevents them from using boats with motor and only wood, they are prohibited from selling the captured fish that can only be consumed, the fishing gear must be hand woven and cannot be bought, and boats should be only wooden and without motor. On the other hand, there are severe impediments to access the fishing sites as many local roads that cross private farms were closed to avoid the passage of fishers forcing them to travel long distances to reach the river. Given that these fisheries are also managed on the basis of centralized decentralized command and control policies, the current legal frameworks fails to take into account the commitment and participation of fishers, ignoring how a change in regulatory standards could have a high positive impact on improving the capitals and the well-being of fishers. This example highlights the need to incorporate regulations that contemplate criteria and governance processes aimed at guaranteeing the legitimate rights of indigenous fishers and the preservations of tenure rules to improve the livelihoods and well-being of indigenous communities.

Session Date: Monday 10 September 2018

Presentation Title: From Individual rights to community commons Cambodia's Community Fisheries Initiative

Presenter: Helga Josupeit on behalf of John Kurien

Defining tenurial boundaries and proving rights in an aquatic milieu is a daunting task. This is further confounded when dealing with a dynamic land-water interface marked by significant seasonal fluctuations. Yet, taking advantage of its overriding tenure over all such terrains, the state reserves the right of granting tenure with differential bundles of rights to individuals or riparian communities to access and manage such fuzzy interfaces. The current fishery rights system in Cambodia is the most extensive and well-developed system of community fisheries in the world. In Cambodia, the tenure rights were initially given to individuals. This system held for many centuries. But in 2000, a bold initiative in Cambodia in South-East Asia became a trail-blazer when individual rights were replaced with community rights in this regard. The case study very briefly narrates this unique case of top-down creation of community fisheries in an inland fishery in Cambodia provide a brief evaluation of the current status and indicate the likely trajectory into the future.

Session Date: Monday 10 September 2018

Presentation Title: Rights-based Approaches in Ecuador's Fishery for Mangrove Cockles

Presenter: Nikita Gaibor

The fishery for ark clams or mangrove cockles (*Anadara tuberculosa* and *A. similis*) has been culturally and economically important in communities that depend on mangrove forests throughout the Pacific coast of Latin America since pre-Columbian times. In Ecuador, more than 5000 artisanal fishermen manually harvest bivalve molluscs of the genus *Anadara*. However, this fishery has been vulnerable to harvesting pressures and habitat destruction. For almost three decades, researchers and international organizations have increasingly recognized the value of Territorial Use Rights in Fisheries (TURFs) as a tool for achieving marine conservation and socially equitable outcomes in fisheries management. Since 2000, the Ecuadorian government began granting mangrove concessions to local fishing associations to promote mangrove conservation and sustainable use in fisheries. Many of those fishing associations designed management plans for benthic resources such as cockles and crabs similar to TURF arrangements in other parts of the world. This paper explores how these institutional arrangements contribute the goals of sustainability with particular attention to challenges and tradeoffs. The mangrove concessions have created conditions that promote habitat health with implications for the productivity of fisheries, as well as economic benefits derived from larger catch and shell sizes. On the other hand, the creation of exclusive access rights for particular user groups has also exacerbated tensions among independent cockle gatherers that feel they are increasingly losing access to their customary fishing grounds. Understanding tradeoffs in Ecuador's integrated approach to coastal management may provide valuable insights for the management of other small-scale benthic fisheries within multiple use coastal zones. We recommend it is necessary to create opportunities for diversified livelihoods in locations where TURFs or similar forms of territorial use privileges are implemented.

Session Date: Monday 10 September 2018

Presentation Title: Designating the Dampier Strait (Indonesia) as a Protected TURF (Territorial Use Rights in Fishing) Network

Presenter: Hari Kushardanto

The adoption of implementing Territorial Use Right for Fishing (TURF) in Indonesia has in recent years been challenged. Not only will it require shift in paradigm of marine conservation and fisheries management, but also it needs a well-designed bottom-up approach that engages local people, including fishers as the resource users and first beneficiaries. Supported by Rare, a US-based conservation and development NGO, Technical Implementing Unit of Raja Ampat Marine Conservation Areas (UPT KKP Raja Ampat), in West Papua Province of Indonesia, facilitated the establishment of 21 TURFs for 19 villages on the two biggest islands in Dampier Strait Marine Protected Area. These 21 TURFs encompass 211,000 hectares, making it the biggest TURF in the country and the largest TURF-reserve network in the world. Central government's recognition of customary (adat) system in the province has made the establishment process efficient. After building awareness of local leaders from the 19 villages about the consequences of open-access and overfishing, a series of workshops and meetings were conducted. Within less than 12 months, the local leaders agree to designate fishing areas along with harvest control rules or fishing regulations. The regulations, made by community-consensus, basically maintain catch by controlling the inputs (gears and time) and the outputs (size and sex). In the long run, to sustain TURF initiative, the UPT KKP Raja Ampat office will support surveillance activities by distributing petrol to all 19 villages for scheduled patrolling and surveillance that the office executes. Rare will also support the office and continue to build the management capacity of local fisheries and through social marketing campaign for sustainable fisheries will accelerate adoption of TURFs, which are locally called Customary Fisheries Area (or Kawasan Perikanan Adat) and the agreed upon fishing regulations.

Session Date: Monday 10 September 2018

Presentation Title: Empowering Artisanal Fisheries to manage communal grounds

Presenter: Christian Barrientos

Equatorial Guinea (EG) is located in the heart of the Gulf of Guinea, one of the most diverse marine areas of Africa. Currently out of the EEZ (~315,000 km²) just 0.5% is under management in national legislation. EG has one of the most significant small-scale fisheries in the region, which supports at least a quarter of a million people living along the coast. In recent years there has been a worldwide decline in fish stocks attributable to over-exploitation. Because artisanal fisheries are usually small-scale and spatially structured, the communities in the coastal areas largely carry out fishing. Similar to other artisanal fisheries, data scarcity is a problem in Equatorial Guinea, in part because it is expensive to collect and because of the poor spatial resolution. However, Small-scale fisheries provide an essential source of food and employment for coastal communities, yet the availability of detailed information on the spatiotemporal distribution of fishing effort to support resource management at a country level is scarce or inexistent. Here, using a national-scale study in the continental area of Equatorial Guinea we survey fishers from 5 communities, in 3 coastal terrestrial protected areas. We combined community engagement and relatively low cost Global Positioning System (GPS) trackers can rapidly provide fine-scale information on: (1) the dynamics of the fishers that operate within this sector; and (2) the location, size and attributes of important fishing grounds upon which communities are dependent. This approach should be considered within a global context where uncertainty over marine and terrestrial resource-users can lead to management decisions that potentially compromise local livelihoods and deprive the indigenous communities of the traditional user rights.

Concurrent Session 2

History and experiences with **open access fisheries**

Session Date: Monday 10 September 2018

Presentation Title: Recognition of the tenure rights for ensuring the sustainability of artisanal fisheries in Senegal in the context of food security and the eradication of poverty

Presenter: Papa Gora Ndiaye

FAO had already adopted the Voluntary Guidelines for Responsible Governance of Tenure on Land, Forests and Fisheries in the context of national food security. These guidelines should be applied in Senegal, in addition to the Code of Conduct for Responsible Fisheries to be reflected in national fisheries legislation. In addition to the general problem of resource scarcity, which is detrimental to the profitability of small-scale fishing units, other obstacles to the sustainability of artisanal fishing in Senegal are:

- The inadequacy and non-enforcement of fisheries regulations
- Strong competition from boats Senegalese and foreign industrial fishing for access to fisheries resources;
- Storage and conservation conditions for fresh produce that are often lacking in artisanal fishing sites;
- Overcapacity that does not fit with the decline of fisheries resources;
- Increasingly difficult and constraining access to the fisheries resources of the countries of the subregion, which impose restrictive conditions on Senegalese fishing boats.

These constraints have not been solved, and have created new challenges for the management of the sector. It is mainly: the absence of regulatory frameworks and the lack of control for supervising the exercise of trades related to small-scale fishing (artisanal processing, fish trade). The non-viability of fishing infrastructure management schemes: The implementation of production support infrastructures (fishing docks, cold storage complexes, etc.) has been a step forward in improving the fishing conditions. craft; but it poses new challenges regarding their management and maintenance because the management plans for these infrastructures are not viable. Despite its important role and all the constraints and threats to the small-scale fisheries sub-sector, no measure is clearly announced either in the sectoral policy letter or in the new maritime fisheries code, let alone in the Draft Inland Fisheries Code to give concessions for access rights to small-scale fisheries and that these be protected by national legislation.

Session Date: Monday 10 September 2018

Presentation Title: Derechos de tenencia en Sipacate-Escuintla, Guatemala

Presenter: Diego De la Cruz

La situación de la pesca artesanal marina en el pacífico de Guatemala, específicamente en la comunidad costera de Sipacate, Guatemala (13°56'00"N 91°09'00"O). Esta pesquería se caracteriza por tener aproximadamente 150 embarcaciones artesanales y 300 pescadores, que alrededor de 3,000 personas se benefician de la pesca artesanal. Los pescadores artesanales entran en conflicto con la pesca industrial, pesca deportiva. Ya que en todo el pacífico de Guatemala no está delimitada el área de pesca correspondiente a cada departamento y tipo de pesquería (pesquería de acceso abierto). Guatemala carece de un plan de gestión pesquero, enfatizando en el control de la producción; cuotas de captura individuales y por sector pesquero. Sistemas de gestión de cuotas, ya que se desconoce y no está documentada la producción total. Por recurso pesquero del sector pesquero artesanal de Sipacate. En el pacífico de Guatemala la pesca ilegal, no declarada, no reglamentada y las operaciones acuícolas ineficientes, la explotación laboral de las comunidades de trabajadores de la pesca, continúan siendo importantes obstáculos para lograr la sostenibilidad de la pesca y la acuicultura. Con estos aspectos mencionados en Guatemala las comunidades costeras tienen la necesidad de llevar a cabo ordenación y gobernanza de la pesca. Se encuentra evidencia que la pesca no reglamentada, con frecuencia la ausencia de plan de gestión y ordenamiento pesquero promueve el agotamiento de los recursos. Este estudio plasmará un precedente para la realización de una gobernanza. Ordenamiento pesquero sobre todo a las especies objetivo, procesos de gestión operacional a corto plazo. Hasta la elaboración y planificación de políticas pesqueras a largo plazo. Para el desarrollo de la pesca y acuicultura de pequeña escala en pro de la mejora de la seguridad alimentaria y la nutrición de las comunidades costeras del pacífico de Guatemala.

Session Date: Monday 10 September 2018

Presentation Title: Neither Praise nor Bury: On Right-Based Fisheries Governance Experiment in Sierra Leone

Presenter: Andrew Baio

Right-based fisheries stewardship approach is contentious either as a tool or an ideology which some scholars appreciate as an efficient resource allocation mechanism whereas, others sees it as a mere distraction from fisheries governance failures. We come neither to praise nor bury right-based fisheries management but, argue that demand-driven allocation of rights to communities in the context of the small-scale fisheries of Sierra Leone has been useful in curbing previous seemingly intractable threats. Some 75% of the population rely on fish as the source of animal protein which increased during the Ebola Virus Disease (EVD) outbreak when bush meat was considered a carrier of the pathogen. Consequently, Sierra Leone would score high on a sensitivity to food fish insecurity scale. Small-scale fisheries contributing 80% of the annual national catch is particularly well placed for fish food security. But, incursions by industrial fishing vessels in the 5 nautical miles Inshore Exclusion Zone (IEZ); overcapitalisation facilitated by a de facto open access regime; and illegal destructive fishing on sensitive grounds, are existential threats engendering willingness in stakeholders to create a resource sustainability environment. With support from projects, Territorial Use Rights in Fisheries (TURFs) is being instituted via Marine Protected Areas (MPAs) for efficient resource allocation. We have chronicled the unique process of the progression towards TURFs via MPAs using scientific and local community knowledge within a co-management framework. Evaluation using the Multi-Criteria Analysis technique revealed opportunities and challenges useful as lessons learnt to other small-scale fisheries desirous of instituting right-based fisheries management.

Session Date: Monday 10 September 2018

Presentation Title: Open access challenges in attaining Sustainable Development Goals in Lake Tanganyika: the case study of Kabonga and Kagunga

Presenter: Beatrice Nyakorema

Open access challenges in attaining Sustainable Development Goals in Lake Tanganyika: the case study of Kabonga and Kagunga landing sites Lake Tanganyika is situated in the Western branch of the East African Rift Valley and is shared between republics of Burundi (8%), Democratic Republic of Congo (45%), Tanzania (41%) and Zambia (6%). About 12 million people live in the Lake basin, of which, over one million people entirely depend on its resources for livelihood. As a result, some species, especially the economic ones, have declined and conflicts have increased due to uncontrolled shifting and changing fishing gears in pursuit of more fish (TAFIRI 2016). The joint lake-wide frame survey in 2011, for instance, indicated an increase in active fishers, motorized fishing vessels and illegal gears by a large percent since 1995 (LTA 2012). Recently, the emergence of modified gillnet with unlimited length which might impact on the sustainability of food and rights of other fisheries in the area has been reported in some parts of the lake (DFO-Burundi). The management and control efforts in the lake are hampered with, among other factors, the lack of harmony in policies, processes, procedures among the riparian states of the lake. The case in point is closing seasons and the illegality of gillnets in the Burundian side of the lake versus the open access and the legality of gillnets in the Tanzanian part of the lake. Using the case study of Kagunga Landing Site in Tanzania and its neighbouring Kabonga Landing Site in Burundi, the current study explores the bottlenecks emanating from unharmonized fishery management laws, policies and practices between Lake Tanganyika riparian states. Keyword: Open access, gill net, overfishing, fisher, harmonised laws, fishery management, Sustainable Development goals, Lake Tanganyika

Session Date: Monday 10 September 2018

Presentation Title: A review of the lobster fishery management in Kenya: A case study in the development of Rights – based fisheries management system

Presenter: Mwaka Said Barabara

This review uses the lobster fishery in Kenya as a case study for the development of rights based fisheries management system. The characteristic of the fishery, production trends, management systems, input and output controls and socio-economic dynamics, challenges and opportunities are discussed. The paper highlights the achievements of co-management and recommends measures needed to achieve effective management of the fishery. Lobster fishery is one of the most important resources in Kenya. The fishery is based on five spiny lobster species; *Panulirus ornatus* (ornate spiny lobster), *P. longipes* (long-legged spiny lobster), *P. penicillatus* (pronghorn spiny lobster), *P. versicolor* (painted spiny lobster), *P. homarus* (scalloped spiny lobster). Lobsters are harvested by small-scale fishers along the entire Kenya coastline. Average annual landing in 2009-2013 was estimated at 84 Mt. In 2016, 389 Mt was landed. Fishers employ different gears to catch lobsters. Lobster fishing has been practised by communities for centuries. Traditional system of lobster fishery management has been in existence. Collaborative fisheries management was introduced in 2006 with the establishment of Beach Management Units (BMUs). BMUs have legitimate jurisdiction over their fisheries, access, user and management rights. The management of the fishery is by limitation on fishing gears, sizes (weight) landed, protection of breeding stock and authorized entry. Market based tools (Marine Stewardship Council certification) and spatial management (co-management areas) are being pursued. Harvest control rules and strategy has been proposed in the draft lobster management plan. A well-defined use, access, management and ownership rights complimented with biological controls and technological interventions can help drive the fishery to sustainability and improve on socio-economic returns.

Key words: Lobster, management, rights-based, Coast, Kenya

Session Date: Monday 10 September 2018

Presentation Title: Sustaining Belizean fisheries through science, participation and managed access

Presenter: Alexis Rife

Belize has been a global leader in marine conservation, widely recognized for innovative and effective ecosystem-based management approaches. The pillar of the management approach is a program which ends open access to fisheries, while creating incentives and empowerment for fishermen to participate in management. Belize is engaged in transformational reform of fisheries management that will to reduce the risk of overfishing and protect the Mesoamerican Reef, which provides jobs and income for over one-quarter of Belize's population. This includes the implementation of spatial secure fishing privileges, known as Managed Access in Belize; the development of science-based fishery management plans; expansion of no-take zones; and the implementation of a modern and comprehensive Fisheries Resources Bill. In this presentation, a team from Belize will describe how this is being accomplished through a process built on multi-stakeholder engagement that is empowering and building capacity for fishermen organizations to be leaders in the management reform process, along with government and civil society partners. The participatory reform process is building widespread political and public support by aligning fisheries management with the national efforts to achieve the United Nations Sustainable Development Goals.

Session Date: Monday 10 September 2018

Presentation Title: Alignment of Cote d'Ivoire and Senegal national Policies to the PFRS

Presenter: Amadou Tall

User- right based management and alignment of Cote d'Ivoire and Senegal national policies to the Policy Framework and Reform Strategy of for Fisheries and Aquaculture in Africa. Dr Amadou Tall- Consultant The African Union has considerable concern for the status of fisheries sector in Africa, particularly the small-scale fisheries as demonstrated in the PFRS for fisheries and aquaculture Africa. This blue print for African fisheries management and aquaculture development highlighted the "adaptive management" to suit local circumstances, but strengthened environmental sustainability, including co-management, rights-based approaches. This resulted to the countries move from open access fisheries to user rights-based fisheries- This is key element to increasing social benefits from the sector without destroying the resource and marine habitats. In this line, the member States of the African Union supports the promote of User-Rights Fisheries through substantial awareness and capacity building campaigns to facilitate the understanding and the implementation of the various approaches in rights-based fisheries management including territorial use rights fisheries (TURFs) and rights to harvest a certain fraction of the allowable catch. Our paper based on two case studies on the alignment of national policy to the PFRS, looked at the various user rights-based fisheries management in Cote d'Ivoire and Senegal, respectively fish deficit country and fish exporter.

Session Date: Monday 10 September 2018

Presentation Title: Dealing with the changing face of artisanal fisheries on the Kenyan coast: rationale for strengthening local institutions, challenges and way forward

Presenter: Paul Mboya Tuda

Along the Kenyan coast, artisanal fisheries make a vital contribution to food security, livelihood as well as a cultural identity to the coastal communities, yet these benefits are at risk because fish stocks are exploited well beyond their sustainable limits. Characterised by simple traditional gears and non-mechanized vessels, the fishing operations are restricted to the shallow coral reef lagoons and seagrass beds not extending beyond 30 m depth. Consequently, the overall catch landed primarily consists of demersal reef species contributing about 38% of the total marine catches, the output per fisher is low and the catch is either sold locally or consumed at the household level. Historically, the fishery operates under an open-access regime with no direct control over entry or effort. However, the government through the state department of fisheries has attempted to regulate fishing operations through input control measures such as licensing, restriction of destructive gears and the protection of breeding areas. Nevertheless, due to lack of enforcement and capacity within the government agencies, these measures have proved ineffective with a recent analysis of interventions indicating a consistent increase in fishers' numbers and use of illegal gears. Attempts to encourage co-management by involving all the majors stakeholders in the fishery in the decision-making process through the Beach Management Units have similarly had limited successes, due to weak local institutions and the failure of current institutions to address the core problem "poverty", which is intricately linked to unsustainable fishing practices and defiance of regulations. With the changing face of artisanal fisheries, where there are strong attempts to generate profit by investing in modern gears and motorised vessels, there are concerns that the local institutions may no longer exert significant influence over who and where fishing occurs given that these responsibilities are not explicitly defined in the current regulations.

Keywords: artisanal; fisheries; enforcement; local; capacity; government.

Session Date: Monday 10 September 2018

Presentation Title: Small scale fisheries and access rights in Timor-Leste

Presenter: Ulrich Schmidt

Contribution to domestic food supplies, income and employment, and to the contribution of oil and gas to public revenues and foreign exchange, fisheries play only a limited role in the national economy. Small scale fisheries support livelihoods in coastal communities in terms of income & informal employment, and increase resilience through diversification of production. In particular in more remote coastal rural areas, fisheries are considered an important driver of local economies, and a major source of food security and nutrition. This paper examines the different access regimes governing in the EEZs of the Northern and the Southern coasts and the management issues and challenges they imply. Uniquely, in comparison to other fisheries, access to the entire Northern EEZ is granted exclusively to small scale and artisanal vessels; access to the Southern EEZ is structured following a conventional, albeit unenforced, zoning approach. A recent stakeholder consultation process confirmed implications for management of these different access regimes: In the Northern EEZ higher levels of environmental threats on mangroves, reefs, sea grass, and of pollution due to higher population pressure were recorded, as well as higher fishing pressure, in particular on reefs. In the Southern EEZ, IUU fishing by foreign semi-industrial fleets occur, due to lack of monitoring, control and surveillance. Based on these conclusions, the paper contemplates the extension of exclusive fishing rights for small scale and artisanal vessels to all of the Timorese EEZ, and discusses the legal and regulatory requirements for sustainable resource use under this premise, including means necessary to ensure compliance. It further proposes technical assistance measures to increase small-scale and artisanal fish production within sustainable limits, for example by diversifying fishing grounds, vessels and gear, and strengthening value chains.

Concurrent Session 3

History and experiences with limited access fisheries: **input control** (licenses, IEs, TURFs)

Session Date: Tuesday 11 September 2018

Presentation Title: Pesquería mixta artesanal de marisqueo (Noia-Galicia-España)

Presenter: Juan Manuel Gómez Blanco

La Cofradía de Pescadores de Noia se encuentra en la Ría de Muros-Noia (estuario) y gestiona en régimen privativo una zona de autorización administrativa de marisqueo a pié (mayoría de mujeres) y de marisqueo a flote (desde embarcación). A esta pesquería que gestiona la organización de pescadores (cofradía de pescadores de Noia) asisten también mariscadores de otras organizaciones vecinas lo que le da un carácter peculiar de solidaridad. Las principales especies son el Berberecho (*Cerastoderma edule*) (70% de las capturas nacionales) almeja fina (*Tapes decusatus*), almeja babosa (*Venerupis corrugata*) y almeja japónica (*Ruditapes philippinarum*). A la pesquería asisten 1.547 personas entre el marisqueo a pié (sin embarcación) y marisqueo a flote (con embarcación) de las que unas 400-500 personas son mujeres. La pesquería se gestiona bajo un plan de gestión donde participan activamente los pescadores artesanales y/o mariscadores con asesoramiento científico. Este plan de gestión es aprobado anualmente por el gobierno regional. Destacar que el plan de gestión es el generador principal de ingresos de la zona donde por indicar un dato este mismo año se han facturado 25 millones de Euros en esta pesquería y que estos ingresos económicos tienen una redistribución equitativa generando riqueza en la zona y siendo de vital importancia para las comunidades marisqueras que tienen una alta dependencia de la misma.

Session Date: Tuesday 11 September 2018

Presentation Title: A Rights-Based Approach to Managing Small Scale Fisheries in Belize

Presenter: Mauro Gongora

Belize's commercial fisheries are important to the livelihoods of approximately 2,800 fishermen, their families and coastal fishing communities. Belize's Fisheries were considered an open access fishery up until 2011. The threat of resource depletion was clearly indicated by fishermen whose catch was constantly declining. July of 2011 marked a turning point in the history of fisheries management in Belize, as the Belize Fisheries Department and key partners pioneered at two of its marine reserves the implementation of a rights-based approach to fisheries management called Managed Access. The program was designed to empower traditional fishers by ensuring greater participation in the decision-making process which impacts their livelihood, and by improving the benefits to be derived from the fish stocks in terms of increased fish landings, reduction in fishing effort, increased prices and revenues. Key to the success of this program are several components which include, but are not limited to: improvements in the licensing/registry system and process; a good monitoring and fishery dependent catch data collection program; a dedicated presence of enforcement personnel and use of new enforcement technologies; and most importantly, the greater active involvement of fishers themselves in the program via fishing area based committees. All of which, coupled with an extensive social marketing campaign and consultation process has yielded significant success and benefits for the resource as well as the stakeholders. In June of 2016, Managed Access was rolled out to the entire territorial waters of Belize and it now secures tenure for fishermen to fish in designated fishing areas called TURFs. In the process of the national expansion, the Belize Fisheries Department established the Managed Access Working Group, which ensures a better participatory intervention of both stakeholders and technical capacities that guide the expansion under an ecosystems based approach.

Session Date: Tuesday 11 September 2018

Presentation Title: The Experience of Community-based Fisheries Management in Korea

Presenter: Dohoon Kim

In Korea, fishing communities have traditionally been allowed to assert exclusive rights to fisheries resources in a certain area of water near their residence to increase fishing productivity and income (called Maul fishery). The fishing community is able to establish self-regulating fisheries management rules and carry out farming activities and fish stock enhancement projects if necessary. The Korean government has actively promoted the community-based fisheries management program since 2001 for a more effective management of coastal fisheries. Under this program, the government granted local fishers authorities to form self-regulating fishing communities as well as authorities to manage fisheries resources and/or fishing grounds under their exclusive right. In response, the government provides administrative and technical supports to the fishing communities. In addition, fishing communities demonstrating active performance were provided with financial assistance by the government to carry out activities for coastal environment improvement or fish stock enhancement. The number of fishing communities participating in the program increased from 63 in 2001 to 1,160 in 2016. As of 2016, as many as 71,762 fishers were found to have joined the community-based fisheries management program. However, little research has been done to quantitatively evaluate the community-based fisheries management program. This paper analyzed how much the program improved fisheries production and income by applying the propensity score matching (PSM) method to fishing communities which participated in the program and those which did not. The results indicated that the communities participating in the community-based fisheries management program showed higher production value and income than those outside the program, indicating a significant positive effect of the community-based fisheries management.

Session Date: Tuesday 11 September 2018

Presentation Title: Re-examining User Rights in the Philippines: Selected Cases in Panay

Presenter: Rodelio Subade

Property rights largely influence the manageability and sustainability of renewable resources like fisheries. The area-specific user rights mandated by Philippine fisheries code has provided more secured fishing grounds particularly for the small-scale fisheries, in the context of competing resource stakeholders. Various variations on user rights have emerged depending on the localization of such fisheries code in various provinces and municipalities. This paper reviews the over-all enabling Philippine legislations (and relevant traditions) on securing user rights in fisheries resources and their conservation, as related with the attainment of relevant sustainable development goals (SDGs). It looks into existing arrangements in two municipalities of Iloilo province in Panay Island. It will attempt to trace back customary tenure rights and traditional practices, if they existed.

Session Date: Tuesday 11 September 2018

Presentation Title: The status of Lake Victoria Fisheries under limited access fisheries

Presenter: Rhoda Tumwebaze

Lake Victoria has a commercial fishery dominated by three species; Nile perch (*Lates niloticus*), Nile tilapia (*Oreochromis niloticus*) and Dagaa (*Rastrineobola argentea*). The estimated total fish landings are about 1 Million tons from about 30,000 fishing canoes operated by 67,000 fishers with a beach value of about US\$ 600 million and export value of Nile perch of about USD \$300 million annually. The main challenges of the fisheries of Lake Victoria which include: increased fishing pressure; inadequate and unsustainable funding to implement research and agreed management interventions; increased illegalities due to weak enforcement; inadequate infrastructure for fish quality and safety and under developed aquaculture to meet the demand of fish and relieve fishing pressure from capture fishery. The objective of this study is to assess the current management regimes and provide possible interventions to improve management. The assessment was done on the data from Frame, Catch Assessment and Hydroacoustic surveys and management reports during regional meeting. Lake Victoria fisheries have been managed under lake wide plans since 2003 but the hydro-acoustic survey results in 2017 showed that majority of the Nile perch in the lake are young with only 5.9% above the lower limit of slot size (50 cm, Total Length). The only legally recognized fishing rights are for fishing vessels. Anyone with legal fishing gears and seaworthy canoe can be given a license. Controls are by gear sizes, fishing methods and size of fish but the number of fishers, fishing gears and fishing canoes have been increasing and sizes of fish catch decreasing despite enforcement on the lake. It is recommended to develop and implement a specific rights based program with participation of key stakeholders for the improvement of the fishery.

Session Date: Tuesday 11 September 2018

Presentation Title: Kodiak's Setnet Salmon Fishery in the Context of Alaska's Limited Access Management System

Presenter: Amber Himes presenting on behalf of Joseph Zelasney

The seafood industry is a cornerstone of Alaska's economy. By all measures, salmon are responsible for the greatest economic impact (jobs, income, and total value) among all species in the Alaska seafood industry. Salmon's total contribution to the economy included approximately 32,900 FTE jobs and \$1.7 billion in annual labor income in 2015/2016.

This case study explores the Kodiak setnet salmon fishery in the context of Alaska's statewide salmon fishery. It presents a brief history of the development of the modern Alaska salmon fishery following the Klondike gold rush in the 1890 through the adoption of the Limited Entry Act and enclosure of the salmon fishery in 1973 under a limited entry permit system.

An overview of the Kodiak setnet salmon fishery and its management is presented. This is followed by a discussion of how the limited entry system has supported utilizing salmon resources for the "maximum benefit" of Alaskans, as required by the Alaska Constitution, both in terms of long-term sustainable use of the salmon resource and toward ensuring the socioeconomic viability of the salmon fishery.

Finally the case study explores challenges and short comings of the Alaska's limited entry permit system for salmon and considers next steps for improving the contribution of the rights based approaches to achieving sustainability goals.

Session Date: Tuesday 11 September 2018

Presentation Title: Cases for the operation of self-directed a closed season in Korea

Presenter: Changsoo Lee

The primary purpose of this paper is to introduce the cases of fishery co-management, particularly in Korea. In recent, the fishery co-management between the government and fishermen has been brought an important shift of paradigm in a part of Korean fishery management policy.

In case of Korea fisheries area, three fisheries cooperatives(which refer to purse sein fishery, trawl fishery, stow net fishery) have a minority of co-management programs. Generally, the main method of fishery co-management programs is 'Fishery Closures' among the programs, and others are restriction of fishing gear and fishermen educations.

In spite of the efforts and time consumes of Korean government and fisheries cooperatives, much to our regret that it is hard to confirm visible results in an increased amount of fisheries resources so far because of the time constraint, namely fishery co-management programs have been conducted just since two to three years before.

However, what's certain is that fishery co-management programs make it possible to positively effect on both of area in fishermen and fisheries resources. Accordingly, it is necessary that Korean government and fishermen should extend the fishery co-management to other fishery areas as soon as possible we can in order to efficiently reduce administrative costs and effectively reserve fisheries resources.

Session Date: Tuesday 11 September 2018

Presentation Title: Providing legislative powers to the commercial fishing industry to set management arrangements

Presenter: Steven Shanks

In November 2017 the Minister for Fisheries provided legislative powers to commercial fishing industry representatives in the Spencer Gulf Prawn Fishery (SGPF) to set the management arrangements for a one year trial period. The legislative powers allow industry representatives to sign the legal instruments that set the area and period of a fishing run (prawn fishing between the quarters of the lunar cycle that include a new moon). The legislative powers have been provided under terms and conditions that require the commercial fishing industry representatives to adhere to the requirements of the harvest strategy for the fishery when setting the management arrangements. The harvest strategy sets Total Allowable Catch (TAC) and areas to be fished based on the results of Fishery Independent Surveys (FIS), which ensures fishing is undertaken at sustainable levels. This is the only example in Australia where the commercial fishing industry has been provided legislative powers to regulate the management of a fishery. The delegation of legislative powers to manage the SGPF is an acknowledgement of the strong history of collaboration between industry and government on co-management of the fishery. By providing industry more ownership of the management they have become more invested in ensuring the sustainability of the fishery. A review of the powers provided will be undertaken in October 2018. Following the results of the review consideration will be given to how to improve the arrangements. As a result of this work other fisheries in Australia are now examining how they can move to a model providing powers to commercial industry to set management arrangements.

Session Date: Tuesday 11 September 2018

Presentation Title: Fisheries Management in data deficient industrial fisheries of Sierra Leone: Input controls and ecological risk assessment

Presenter: Andrew Baio on behalf of Sheku Sei

Managing fisheries in data deficient situations could be challenging in developing countries such as Sierra Leone, where technical capacities are not yet fully developed. We present a diagnosis of industrial fisheries management planning based on input controls of licenses, inshore exclusion zone limitations, ecological risk assessment and bio-economic limit reference points. Existing industrial fisheries user rights in Sierra Leone based on license allocations relying on gross registered tonnages (GRT), mesh size regulations and area restrictions does not account for allowable catches, and could be reactive to top-down approaches. Management decision making based on this system has often been characterized by weak evidences and minimum transparency. We have therefore used an Ecological Risk Screening (ERS) technique to gauge information on the effects of fishing on different ecological systems in order to assess impacts, prioritize issues and proffer advice on the risks associated with fisheries management units. The ecological risk assessment reveals associated fisheries management challenges including illegal, unreported and unregulated (IUU) fishing, seaweed and plastic pollutions and degradation of mangrove habitats. The evidences of coastal erosions associated with climate change events, scanty knowledge on catch levels for inshore pelagics, shrimps and demersal resources, limited credit facilities for fishers, post-harvest losses, poor hygiene and fish trade limitations are critical risk areas to address. Over 100 fishing trawlers currently operate in the industrial fisheries of Sierra Leone without quota management restrictions for catches. Our empirical analysis reveals that revenues at maximum economic yield (REV MEY) can be maximized at levels 21% less than the sustainable yields for shrimps. A precautionary fleet limitation of 20 fishing vessels for shrimp fishery is proposed under a dual scheme of demersal fish and shrimp licenses, with fishing restricted to night hours of 6pm to 6am to minimize bycatch.

Session Date: Tuesday 11 September 2018

Presentation Title: The input control of Jimo's fishery management

Presenter: Meng Su

Jimo became a district of Qingdao in 2017, that is located in the east of the Qingdao and the southeast of the Shandong Peninsula. In 2016, the city ranked 9th among the top 100 counties in China. The eastern part of the city faces the Yellow Sea and encompasses 2517km², with a coastal extent of 183km. There are seven natural bays, 28 large and small islands, 15 fishing port docks in the area. There are abundant marine fisheries resources along the Jimo coast. The fisheries in this area have been operating since antiquity and the fishing scope of Jimo fishing vessels is in the area of the Yellow Sea and Bohai nowadays. The economic output of the farming, forestry, animal husbandry and fisheries industries of Jimo was valued at 11.5 billion RMB in 2016, with fisheries being estimated to account for 33.5% of the total, or approximately 3.85 billion RMB. This case study explores the development and management of Jimo's marine fishery. First, it presents the current situation of Jimo marine fishery production and the cooperation mode of the fishing village. An overview of the formation and development of Jimo's marine fishery management administration and the fishery management measures are presented. Then followed by the discussion of the effects of fishery management measures on fishery production and resources. Finally the case study explores challenges and shortcomings of the Jimo's current fishery management system and considers the future approach to fishery management based on users rights to achieve the restoration of fishery

Session Date: Tuesday 11 September 2018

Presentation Title: The sardine fishing in the Bolivarian Republic of Venezuela

Presenter: Telimay Nailiu Castro Perez

The Bolivarian Republic of Venezuela is one of the most important fishing countries in the Atlantic Caribbean area. The country has marine and continental environments, characterized by its high diversity of resources. There are two sectors: extractive and aquaculture where two subsectors coexist: artisanal and industrial. The fishing focuses on the production of two marine species: sardine (*Sardinella aurita*) - artisanal fishing- and tuna (*Thunnus albacares*) –industrial fishing-, which represent half of the total catch. Both species generate high levels of employment. The rest of the production comes from other maritime artisanal fisheries, and from the cultivation of aquaculture products such as marine shrimp, fish (*Colossoma macropomum*) and molluscs. Inland fisheries have lower production. The extractive activity is dominated by marine artisanal fishing, in contrast with other Latin American countries, this is due to the regulation of the sardine resource limited by Law to artisanal fishermen and whose fishery has been practiced for 74 years. Regarding the total production reported by the different fisheries, in 2017 the artisanal maritime sector contributed with 77% of the total catches, where the sardine contributed with 31%. This species is distributed in the Caribbean Sea and Northeast of the country, where productivity is high due to upwelling. The sardine presents fluctuations in its biomass due to the effects of biological and environmental conditions and catches. The fishery for this resource involves a series of interrelated actors from fishermen to the consumer. In economic terms, the activity is relevant because of the number of jobs generated during the capture, processing and commercialization. In the social sphere, the population structure is constituted mainly by young people, with 61% of fishermen. The sardine is a resource of great strategic importance for its contribution to food security and is considered as the main fishing resource in Venezuela.

Session Date: Tuesday 11 September 2018

Presentation Title: China's marine fisheries management since the implementation of the Fisheries Act in 1986

Presenter: Yang Han

Over the past 30 years China's marine fishery has made brilliant achievements. The output in 2016 the total amount of marine catch was 1328 ten thousand tons, which solved nearly 1 million fishermen's employment. The development and utilization of marine fishery resources not only promote the development of marine fisheries, the economic and social development of the coastal fishing areas, but also contributes to the protection of national food security, the promotion of coastal fishermen's income increase, and the solution of the fishermen's poverty in some areas. However, with the enhancement of the development ability of marine fishery resources, the total amount of marine fishery resources has gradually increased year by year. China has adopted a series of policies and measures to control marine fisheries since the implementation of the fishery law in 1986. In order to solve the problem of overexploitation of offshore marine fisheries resources, China has successively promulgated the regulations on limited access fisheries : Fishing License Management (1986), "Double Control" system (1987), " Stock Enhancement " (1989), "Summer Fishing Moratorium (1995)", "zero growth" (2000)", "ship reduction and transfer" (2002), "marine protected area" (2011), "marine pasture" (2015), "total resource management" and "quota fishing management" (2017). Under the condition of the limited reproduction and regeneration capacity of marine fishery resources, the marine fishery resource is declined rapidly and ecological environment along the coast of China sea is deteriorated. How to develop scientifically and use rationally marine fishery resources to promote the sustainable development of marine fisheries? It is urgent to solve problems and adopt more targeted policies. This case study analyses the remarkable history characteristics, experiences, effects and reasons of the exploitation and utilization of marine fishery resources in China since the implementation of the Fisheries Act in 1986. On this basis, We put forward some policy recommendations.

Concurrent Session 4

History and experiences with limited access fisheries: **output control** (TACs, IQs, CDQs, Catch Shares, QMS)

Session Date: Tuesday 11 September 2018

Presentation Title: Efectos del régimen de cuotas individuales (CI) en la industria pesquera pelágica de Jurel (*Trachurus murphyi*) de la zona centro sur de Chile

Presenter: Rodrigo Zamora Gomez

En Chile, a finales de la década de los '90, se gatilló la denominada “carrera olímpica” en las principales pesquerías, lo que provocó muchas ineficiencias y mal aprovechamiento de los recursos. Se registró sobreinversión en la flota pesquera, menores incentivos para las inversiones y desarrollo de una industria complementaria debido a la incertidumbre respecto del acceso y disponibilidad del recurso, y una actividad pesquera marcadamente estacional, lo que desencadenó en un clima de inestabilidad laboral. A principios de 2001, se impulsó un cambio regulatorio muy relevante que duró hasta 2012: Cuotas Individuales no Transferibles (CI). Las principales ventajas de las CI fueron otorgar certeza jurídica y con ello racionalidad a la industria, lo que llevó al inmediato ajuste de la flota a menos del 50% de su capacidad, aumentó la eficiencia económica, disminuir los niveles de incertidumbre, entre otros. Este régimen fortaleció los derechos de pesca y le dio mayor estabilidad al sector pesquero industrial, por lo que fue perfeccionado en 2012 transformándose a cuotas individuales transferibles (CIT) por 20 años, renovables. Lamentablemente en el sector artesanal, que presentaba los mismos problemas de sobre esfuerzo, sólo se pudo establecer un mecanismo incompleto de cuotas regionales. En este estudio, se busca mostrar las bondades del sistema de CIT en Chile y su contribución al ordenamiento de la actividad pesquera industrial, así como mostrar que ha servido de ejemplo para que el sistema de cuotas de la pesca artesanal o régimen artesanal de extracción (RAE), pueda ir avanzando en la misma dirección, aunque también se intentará mostrar las carencias en su aplicación y lo que debería hacerse en la pesca artesanal, considerando los positivos resultados en la industria. Las CIT también han tenido un positivo impacto en los ODS, especialmente los ODS 8, 10, 12 y 14.

Session Date: Tuesday 11 September 2018

Presentation Title: Manejo Pesquero del paiche “Arapaima gigas” en la cocha (lago) El Dorado de la Reserva Pacaya Samiria - Loreto, Perú

Presenter: David Mendoza

Los recursos naturales son patrimonio de la Nación, y el Estado, promueve su uso sostenible, la conservación de la diversidad biológica y de las áreas naturales protegidas, así como el desarrollo sostenible de la Amazonía con una legislación adecuada; en concordancia con la Constitución Política del Perú. El Reglamento de la Ley General de Pesca, señala que el ordenamiento pesquero se aprueba mediante reglamentos, que establecen principios, normas y medidas aplicables a recursos hidrobiológicos que deban ser administrados; en ese marco se aprobó el Reglamento de Ordenamiento Pesquero (ROP) de la Amazonia, teniendo como objeto, entre otros, “Facilitar la formalización de las actividades extractivas y de procesamiento pesquero que incidan en las diferentes pesquerías de la Amazonía Peruana, promoviendo su desarrollo por medio de Programas de Manejo Pesquero, capacitación, transferencia de tecnología y apoyo a las organizaciones sociales de pescadores”. El ROP de la Amazonia establece Programas de Manejo Pesquero cuya finalidad es poner en práctica una explotación controlada de especies o conjunto de especies en un ambiente particular, bajo normas y regulaciones vigiladas periódicamente y que responde a la necesidad socioeconómica que implica la realización de la pesca comercial o de subsistencia de una comunidad pesquera y la conservación de una o varias especies que sustentan estas pesquerías. En ese marco, se aprobó el Plan de Manejo del “Arapaima gigas” de la Cocha El Dorado en la Reserva Pacaya Samiria, en la cual se da oportunidad a la Organización de Pescadores Yacutayta de aprovechar el recurso paiche mediante la extracción de cuotas experimentales, previo monitoreo, garantizando el uso sostenible y la rentabilidad de la extracción del recurso, a través de artes de pesca adecuados, vigilancia y control, respecto de tallas mínimas, contribuyendo con la recuperación de la especie, y mejorando la calidad de vida y reconocimiento de la comunidad

Session Date: Tuesday 11 September 2018

Presentation Title: Asignación de cuotas individuales en pesca artesanal

Presenter: Alejandro Gertosio

Potencialmente, la conducta de los operadores hace migrar la condición de una Pesquería desde su estado virginal, a niveles que podrían llegar a estar por bajo la viabilidad económica de la actividad, haciendo disminuir los rendimientos a niveles sub óptimos, teniendo como efecto la sobreexplotación de los recursos, requiriéndose por tanto desde la regulación, diseñar e implementar herramientas tendientes a prevenir la ocurrencia de esta condición.

La normativa chilena reconoce como piezas claves para el manejo de las pesquerías, la fijación de cuotas, limitaciones a la entrada y asignación de derechos de uso, en sus diversas formas, estando vigentes las siguientes:

- a) Área de reserva costera para uso exclusivo de la pesca artesanal
- b) Asignación de cuotas de captura entre subsectores, artesanal e industrial.
- c) Asignación de cuotas industriales, bajo la figura de cuotas individuales transferibles.
- d) Asignación de cuotas individuales transferibles vía subasta, para todo usuario.
- e) Asignación al interior del sector pesquero artesanal, en las formas de régimen bentónico de extracción y proceso, áreas de manejo, régimen artesanal de extracción y el caso particular de la asignación via subasta de una fracción de la cuota del recurso bacalao de profundidad.

En ese marco destacan los avances en la asignación de cuotas individuales de peces al interior de la pesca artesanal, la experiencia de los últimos años y el aprendizaje que su implementación ha significado para los usuarios, con los riesgos, retos y oportunidades que estos modelos conllevan. Este trabajo se hará cargo de las distintas formas que toma la asignación de cuotas en la pesca artesanal, con énfasis en la asignación de cuotas de peces vía Régimen Artesanal de Extracción (RAE), a organizaciones de pescadores artesanales, profundizando en el caso de la pesquería con arte de cerco de sardina común y anchoveta de la Región del Bio Bio.

Session Date: Tuesday 11 September 2018

Presentation Title Towards TAC-based Fisheries Management in Korea - Experiences and Challenges

Presenter: Jungsam Lee

Coastal fisheries contribute to fishermen's livelihoods and regional development through employment creation in coastal areas and quality supply of seafood. Compared to 2.6 thousands fishing boats in offshore fisheries, there are 42 thousand fishing boats in coastal fisheries, which is far more effective in creating and supporting jobs in coastal areas. And coastal fisheries account for about 20 percent of the total annual fishing production volume, but in terms of production value, they account for about 40 percent of the total, producing quality seafood with higher value such as live fish and fresh fish than offshore fisheries. But the sustainability of coastal fisheries is threatened by the sharp decline in annual fisheries resources since the mid-1990s. Thus Korea is actively engaged in stock enhancement projects such as creating coastal ranches, installing artificial reefs, and releasing fish fries in the coastal waters.

Session Date: Tuesday 11 September 2018

Presentation Title: Quota allocation by vessel (IVQ) management of the Peruvian anchoveta fishery, in a strong environmental variability ecosystem

Presenter: Adriana Alva presenting on behalf of Ulises Munaylla

The largest monospecific fishery in the world, the Peruvian anchoveta (*Engraulis ringens*), was subjected in 2008 to the application of a rights-based management system, consisting of quota allocation per vessel (IVQ), in a more productive ecosystem of the world (Humboldt Current) but at the same time characterized in the last years by the intensification of climate variability, where at the same time putting in test and demonstrating its adaptation and resilience, the anchoveta. In these conditions of uncertainty of the ecosystem, the intensification of marine research was important, in order to have solid base to sustain the management measures and especially the rights-based management system, to have a greater precision of the estimates the volumes of biomass and the total allowable catch, which together with the capture control programs are the basic elements of the success of the management system based on the allocation of fishing quotas. The implementation of the rights-based management system occurs in circumstances in which an open access in a large fishery, that led to over exploitation of the resource for exceeding levels of allowable catch, bycatch, the discarding of species, among others, that were threatening the sustainability of the resource. The results of the application of this management system, after 10 years of its implementation, has been successfully fulfilling its objectives, including ensuring the sustainability of anchoveta, reduction of the fleet fishing and consequently of fishing effort, disappearance of the race by the resource, greater quality and added value in the products, environmental improvement of the bays, greater profitability, better working conditions of the crew, strengthening of scientific research, modernization of control, among others. The case study will show in detail the results from the environmental, economic and social perspective, in the context of the sustainable development

Session Date: Tuesday 11 September 2018

Presentation Title The fishery right of Zhoushan in the Context of Limited Access Management System

Presenter: Yang Yang

Zhoushan fishery is the largest one in China, accounting for one tenth of China's annual fishing output. In 2016, the total output of aquatic products was 1.925 million tons. Zhoushan is also China's largest seafood production, processing and marketing base, known as the "fish warehouse" and "seafood capital". Fishery is the typical resource-environment-dependent industry, in the context excessive exploitation and utilization of fishery resources, the resources and environment foundation which the fishery production depending on is becoming more and more weak, production space is extruded, the fisherman's fishery rights and interests are being challenged. This case study first briefly introduces the fishery history and the characteristics of fishery production along Zhoushan coast. After that, this paper discusses the fishing permit system regulated by "fisheries law of the People's Republic of China", the goal orientation is restrictive management of fishing operations, rather than to determine the specific fishermen or group exclusive fishermen fishing rights. Fishermen cannot resist the damage to fishing rights caused by external factors. The internal resources recession and fishing competition will harm to the integrity of fishermen fishing rights and interests, meanwhile, illegal fishing and illegal operations will also damage the fishermen's legitimate rights and interests. Finally, the case studies the path design of the property right and fishery right system of coastal fishery resources, puts forward the reform proposal of fishery right system, and provides a sample for the reform and innovation development of China's fishery basic system

Session Date: Tuesday 11 September 2018

Presentation Title: What are the key factors for a successful design and implementation of a right-based system in the allocation of fishing opportunities in the demersal fisheries in Sweden?

Presenter: Karin Kataria

With background of the needs created by the landing obligation, the Swedish Agency for Marine and Water Management (SwAM) in 2017 introduced a system where fishing opportunities can temporarily be transferred between individual fishermen during the year. The new system is based on annually individually allocated fishing opportunities were the individual allocations, with some exceptions, are based on the individual fishermen's reported catches during a reference period (2011-14). The design of the system paid particular attention to small-scale coastal fisheries fishing with passive gears for which common unallocated quotas are reserved. The new system means increased flexibility and better possibilities for individual fishermen to adjust their fishing opportunities during the year, which probably gives them better possibilities to comply with the landing obligation. It may however also arise challenges that have to be considered in future adjustments of the system. For example, although the system allows for increased flexibility, quotas may still be limiting at the individual level. Given economic incentives to maximise the value of the own fishing opportunities, this may affect compliance. Another concern is that since the fishing opportunities are annual and only can be transferred during the year, individual fishermen's long-term planning is impeded because of uncertainty about what fishing opportunities and income they will have the coming years. This may in turn contribute to reluctance to invest in better and environmental friendly technology. Another challenge is that various "lock-in" effects can be observed in the present system. SwAM is currently analyzing the first year with the new system of allocation fishing opportunities. In case the system would be adjusted to allow for longer-term fishing rights, the design of such a system is of critical importance in order to avoid unwanted effects.

Session Date: Tuesday 11 September 2018

Presentation Title: Pacific Groundfish

Presenter: Priscilla Rivas

In 2011, the Pacific Fisheries Management Council (the Council) established a catch-share program for the Pacific Groundfish Fishery which spans the entire West Coast of the U.S. Catch-share programs typically divide the total allowed quota of fish among fishermen, with each quota owner getting a certain percentage of the total. At the time of implementation, the Council established an Adaptive Management Program (AMP) that reserves 10% of the quota to address any potential issues that arise from the implementation of a catch-share system. The five potential issues that were identified by the Council at the start of the program were barriers to new entrants, community stability, processor stability, conservation, and any other unintended consequences of the catch-share. During the first few years of the catch-share program, the AMP quota was passed through to the fishermen to avoid any disruption to fishermen's livelihoods. After the first few years, the Council could not determine any pertinent issues or ways to address those issues with the 10% quota, so the pass through to fishermen continued. Now, with an upcoming 5-year review of the program, the Council will be deciding whether to permanently pass the 10% AMP quota through to fishermen, effectively removing the AMP from the catch-share program, or to determine some more permanent plan for it. For our capstone project over the next year, we will be evaluating policy options for the AMP quota, determining if there are alternative uses for it that could address any issues within the fishery, or if it should be permanently allocated to fishermen. Our client, Frank Lockhart, Program Director at the National Marine Fisheries Service (NMFS) West Coast Region, has identified three specific issues that he feels are the most important to consider in our evaluation: 1) barriers to new entrants, 2) community stability, and 3) processor stability.

Session Date: Tuesday 11 September 2018

Presentation Title: History and Experiences with Limited Access Fisheries (Input and Output Controls) -The Case of the Small Pelagic Fishery in Angola

Presenter: Vieira Ferreira Nzambi Códia

Angola has a very long coastline, sharing the Benguela Current Large Marine Ecosystem (BCLME) with Namibia and South Africa in the SADC region, one of the most productive Large Marine Ecosystems (LME) in the world. The fauna is rich in small pelagic species, crustaceans and demersal finfish community, explored by the commercial fishery (Industrial and Semi-industrial fleet). This brief study looks at how these two fleet segments get access to the pelagic fishery. Seeks to explore the management and existing right-based approaches and their potential to securing the sustainability of the resources and achievement of the sustainable development goals (SDGs), food security, hunger and poverty alleviation. The study reveals that the Angolan commercial fishery in general is managed by a Right-based approach in the form of IVQ, TAC, and regulated by a set of management measures and enforced by MCS. Their contribution to the economy is significant despite the challenges faced in the fishery sector from environmental fluctuations to human and scientific capacities.

Concurrent Session 5

History and experiences with **tenure rights and the post harvest sector**

Session Date: Tuesday 11 September 2018

Presentation Title: La mujer en la captura y pos-captura en la pesca

Presenter: Elsy Perucho Gómez

Este estudio de caso presenta la contribución de la mujer en captura y post captura de la pesca en las siguientes zonas y fases de la cadena de pesca artesanal en Colombia: En el pacífico, la mujer participa en la extracción de piangua, donde regularmente involucran a sus hijos, también realizan limpieza del camarón al ser contratadas por los dueños de las embarcaciones. En el caribe, en las empresas procesadoras, el 70% de mano de obra corresponde a mujeres trabajando a destajo en cargos operativos y administrativos. En los ríos pescan con equipos de los pescadores que en su mayoría son sus esposos, terminada la faena evisceran y comercializan los productos en puertos de desembarque. En el complejo lagunar de Yahuaraca - Amazonas, la Autoridad Nacional de Acuicultura y Pesca estableció la captura permitida por familia con fines de comercialización. Las mujeres de estas comunidades se involucran en pesca, venta, control y toma de información en los lagos, aportando a la sostenibilidad de los recursos pesqueros a partir de acuerdos comunitarios. La intervención de la mujer en la pesca se da bajo la regulación existente abarcando métodos de pesca, artes, tallas mínimas de captura, épocas de veda, pago de tasas de acuerdo con el volumen a comercializar y la implementación de la guía de movilización. Finalmente, se aborda la problemática correspondiente al bajo compromiso institucional evidenciado frente al sector de la pesca, a pesar de la existencia del programa de Mujer Rural y del liderazgo de FAO Colombia para difundir directrices voluntarias sobre la tenencia. Para mejorar las condiciones de las mujeres que participan de esta actividad y alcanzar las metas del post conflicto, es indispensable concretar estrategias de gobernanza frente a las directrices en pesca.

Session Date: Tuesday 11 September 2018

Presentation Title: Better rights for female clam collectors in Tunisia

Presenter: Helga Josupeit

In Tunisia, the clam production sector employs more than 4 000 women at 17 production sites, primarily concentrated in two major coastal areas – Gabès and Sfax – with an average annual production of 700 tons mostly directed for export. These women have no rights on the resource they are collecting and which represents their only source of income. As a result of joint-coordination between FAO and the Tunisian government, together with private stakeholders, Tunisian women clam collectors have been given privileged access to the high-value European market, with an equity partnership with the main Italian importer of clams. Women collecting clams have increased their sales price by about double due to this agreement. However, they have no right to own the beach grounds or get concessions for aquaculture activities, where they could grow undersized clams. This problem with user rights, originating in the Tunisian law for aquatic resources, is also a stumbling block for potential culture and on-growing of other bivalves, such as razor clams, which the FAO project had identified as a product with excellent on-growing possibilities and with good market opportunities. It is still a long way for the women to have equal rights to the clam resource.

Session Date: Tuesday 11 September 2018

Presentation Title: Small-scale fishery promotion in high value markets

Presenter: Eric Ross Salazar

The community of Costa de Pájaros in the Pacific of Costa Rica fulfilled legal requirements for the creation of a responsible fishing marine area (RFMA) on its traditional fishing grounds. The area is open access to any licensed fisher that complies with special regulations within the area, however this has caused conflicts with fishers that use less responsible gear that were displaced and with fishers from other communities that travel to the RFMA to fish. Fundación MarViva has worked for several years with members of the fishers' community and three landing sites to promote responsible fishing. Currently, these three landing sites sell to corporate buyers or to intermediaries that work with corporate buyers willing to promote responsible fishing, these include restaurants, hotels and supermarkets. Fishers help the landing site managers carry out monitoring of catches and managers fill traceability questionnaires so that corporate buyers can be sure of the origin of the product. Fishers comply with special gear regulations that go beyond the requirements of the RFMA and landing sites only sell fish above minimum landing sizes as responsible.

Session Date: Tuesday 11 September 2018

Presentation Title U.S. West Coast Shoreside Non-Tribal Pacific whiting fishery

Presenter: Christopher Anderson presenting on behalf of Marie Guldin

The US West Coast shoreside non-tribal Pacific whiting fishery takes place off the coasts of Washington, Oregon, and California. Harvesters target Pacific whiting, a migratory pelagic species sometimes marketed as Pacific hake, and deliver catch to land-based processing facilities. Harvester participation is constrained by a limited entry permit program. Harvests are constrained by a total allowable catch, which is set annually through a bilateral management agreement between the US and Canada known as the Pacific Whiting Treaty. Through 2010, Pacific whiting catch was monitored within seasons, and the derby fishery closed when the sector allocation or a bycatch limit was reached. In 2011, individual tradeable fishing quota was introduced into the fishery through implementation of the West Coast Groundfish Trawl Catch Share Program. The complex program is comprised of a number of provisions, including a mandatory annual cost-earnings survey of all participants and 100% observer coverage. The program also includes an allocation of 20% of Pacific whiting harvesting quota to eligible shoreside processors. Initial quota allocations for all quota share holders, including processors, were based on historical participation during qualifying years. Allocation of harvesting quota to shoreside processors was intended to compensate for projected adverse impacts of catch shares on the sector, including stranded capital and shifts in bargaining power in the ex-vessel market due to season lengthening. Some observed changes under catch shares include season lengthening, consolidation in both the harvesting and processing sectors, higher ex-vessel prices, and increases in operating profit for the average vessel and processor. Many observed changes are influenced by increases in the TAC occurring under catch shares but exogenous to the program.

Session Date: Tuesday 11 September 2018

Presentation Title: A Case Study of Advanced Post Harvest Management in Korean Fishing Village Community

Presenter: HeonDong Lee

There has been a growing interest in post harvest management to improve the quality and freshness of fisheries products. In the past, fishermen focused on the quantitative production, and efforts to increase the value added of marine products were relatively insufficient. Recently, however, the fishing village community has been trying to increase the value added by combining the production, processing, distribution, sales, and tourism of fishing village. These 6th industrialization contributes to the vitality of the fishing villages, the income of the fishermen, and the local economy. In this study, we introduce an advanced case of increasing the value added and the marketability of marine products through the post harvest management that led by Korean fishing village community.

Session Date: Tuesday 11 September 2018

Presentation Title: The Bering Sea/Aleutian Islands Crab ITQ Program

Presenter: Christopher Anderson

The Bering Sea/Aleutian Islands crab fishery has been made famous by Discovery Channel's Deadliest Catch program, which shows viewers how harvesters brave the ice and storms of the Bering Sea to catch king, snow and tanner crabs. Although always well managed biologically, in 2005 the fishery implemented an ITQ program in order to reduce overcapitalization and reduce the competitive fishing that created dangerous conditions. In the first year of the program, the number of vessels participating decreased by two thirds. Many exiting vessel owners have continued to benefit from the fishery by leasing their quota allocations to vessels that are still fishing, but their hired crews have been displaced. A distinctive feature of the BSAI crab program is that, in addition to harvest quota, processors were allocated processing quota. This means a pound of landed crab must be offset by harvest quota, and by processing quota. This feature is designed to maintain the geographic distribution of landings, and in particular sustain historic processing participation in island communities in the Bering Sea that are near the fishing grounds, and which had a considerable advantage during the derby. This case study will draw on several recent NOAA studies, including the recently completed ten-year review of the effects of the catch share program.

Concurrent Session 6

History and experiences with **tenure rights and competing fishing stakeholders** (migratory fishing, industrial and SSF, national, regional, international issues)

Session Date: Wednesday 12 September 2018

Presentation Title: Collaboration experience between the artisanal and industrial fisheries in Costa Rica

Presenter: David Chacón presenting on behalf of Vivienne Solis

Alrededor del mundo, los sectores de pesca artesanal y de pesca semiindustrial tienen un largo historial de enfrentamientos, enemistad y rivalidad. Gran parte de esta situación se debe a la disputa por los recursos y por el espacio de pesca, ya que muchas veces ambas flotas buscan centrarse en las mismas zonas. Costa Rica rompe el ciclo de conflictos sobre este tema en el año 2010, cuando finalmente y en una negociación ganar-ganar, ambos sectores deciden acordar un área de alejamiento de los barcos de arrastre en el marco de un modelo de gobernanza compartida entre los pescadores artesanales y el gobierno, en el Área Marina de Pesca Responsable (AMPR) de Tárcoles. El acuerdo entre artesanales y semiindustriales luego de unos meses, se reveló como sumamente exitoso y de provecho para ambas flotas. Esta experiencia, impulsó el proceso asociado a la Directriz Presidencial Número 21-P publicada en el Diario Oficial La Gaceta N°. 101 del 27 de mayo de 2015, denominada "Para la Generación de una Política Nacional de Aprovechamiento Sostenible de Camarón, Generación de Empleo y Combate a la Pobreza". Siete años después del acuerdo en Tárcoles, se crea una mesa de diálogo con todos los sectores de pesca, las instituciones, la academia y la sociedad civil. A raíz del acuerdo, lo acordado en Tárcoles es extendido a todo el país, ya que la flota semiindustrial se compromete a respetar un retiro a lo largo de ambas costas de Costa Rica. Esta presentación discutirá los fenómenos aquí sintetizados y sus perspectivas para el futuro. Compartirá cómo se relacionan ambos eventos con mayor detalle y sus consecuencias en torno al aprovechamiento de los recursos importantes para las dos flotas pesqueras. La presentación brindará insumos para que este ejemplo pueda ser compartido en toda su extensión a nivel de la región y el mundo, así como un análisis de estos procesos a la luz de los retos actuales de cara al contexto político presente.

Session Date: Wednesday 12 September 2018

Presentation Title: La pesquería de corvina (*Micropogonias furnieri*) en Uruguay

Presenter: Pablo Puig

La corvina (*Micropogonias furnieri*) es un recurso presente en aguas del atlántico sudoccidental y se administra (en la Zona Común de Pesca) de manera conjunta entre Argentina y Uruguay mediante la Comisión Técnica del Frente Marítimo (CTMFM) que fija todos los años la Captura Total Permisible (CTP). En Uruguay existen dos flotas que trabajan sobre el recurso corvina, la industrial y la artesanal. La industrial con 33 buques que operan al arrastre y en pareja, y la artesanal con aproximadamente 418 embarcaciones que todo el año o en algún momento operan sobre la corvina. La interacción entre las dos flotas fue en determinado momento muy conflictiva a pesar de estar claramente normado la prohibición de ingreso a la flota arrastrera en la franja costera de 5 millas reservadas para la pesca artesanal. Hace aproximadamente 10 años se implementó la obligación a la flota industrial de instalar un sistema de localización de buques vía satélite (SLB) o Vessel Monitoring Systems (VMS) terminando, casi totalmente, con los conflictos entre las flotas. Las dos flotas tienen restricciones en su operación:

- Industrial: zonas de pesca asignadas, vedas espacio temporales, tamaño mínimo de malla en redes, longitudes mínimas de desembarque, cuota de pesca (asignado a cada país); esto sumado a la obligatoriedad de VMS.
- Artesanal: zonas de pesca asignadas, longitudes mínimas de desembarque, prohibición temporal de trabajar a menos de 300 metros de la costa.

La normativa vigente (que se presenta en el trabajo) apunta sobre todo a dar sostenibilidad al recurso, mantener un equilibrio en la equidad de acceso a los recursos de todos los usuarios, disminuir los conflictos dentro y fuera de cada modalidad de pesca además de la interacción con áreas protegidas, pesca deportiva y deportes náuticos entre otros.

Session Date: Wednesday 12 September 2018

Presentation Title: Conflictos de intereses entre la actividad pesquera artesanal e industrial en Colombia

Presenter: Elsy Perucho Gómez

La pesca en Colombia se ha dividido en dos etapas claves que son el ejercicio de la pesca artesanal desde la prehistoria con registros de pesca realizada por las tribus que habitaban nuestro territorio; y la aparición de la actividad industrial desde 1962 hasta el presente, este nuevo avance surgió como una alternativa socioeconómica a las dos costas marinas (Atlántico y Pacífico). Inicialmente, la actividad establecida para la industrial fue la captura y procesamiento de camarón marino, esto conllevó a que se realizaran grandes inversiones en infraestructura y en apoyo tecnológico para que esta industria tuviese los rendimientos requeridos. Por lo tanto, este avance obligó a que la pesca industrial invadiera los territorios de la pesca artesanal reduciendo el campo de acción de los pescadores artesanales. Es por lo que, a partir de los años 80 los pescadores introdujeron en su esquema de trabajo los trasmallos monofilamentos, denominados en la región como “Trasmallos electrónicos”, esta nueva tecnología de baja inversión y de alto impacto en las capturas redujo el campo de acción de los pescadores industriales lo que provocó una baja en sus niveles de producción llegando a la quiebra a muchos de ellos. El segundo conflicto es la invasión de los barcos atuneros, estos tienen una altísima capacidad de captura permitiendo que cuando entran en acción muchas de las áreas de pesca artesanal quedan totalmente empobrecidas, esto ha generado una serie de protestas por parte de los pescadores artesanales ya que una sola embarcación atunera actuando en un solo mes podría dejar sin pesca a los artesanales por todo un año. Igual ocurre con la pesca deportiva, mientras que los palangreros capturan y arrasan con la pesca, los deportivos liberan al medio y generan divisas.

Session Date: Wednesday 12 September 2018

Presentation Title: Conflictos en el desarrollo productivo en las pesquerías de merluza (*Merluccius gayi peruanus*) en Perú

Presenter: David Mendoza Ramírez

La merluza (*Merluccius gayi peruanus*) es una especie que habita hasta los 600 m de profundidad de la plataforma continental, sus pesquerías se realizan desde el extremo norte de dominio marítimo y los 6° 00' S. Existen dos tipos de flotas orientadas a esta pesquería siendo éstas la flota industrial arrastrera, que opera en zonas autorizadas por el Ministerio de la Producción (PRODUCE) y la flota artesanal que opera mayormente frente a Paita – Piura. La merluza es una especie en proceso de recuperación en Perú y muchas regulaciones y decretos se aplican a su pesquería, estableciéndose períodos de pesca, zonas de pesca, capturas totales permisibles y cuotas de pesca individuales las cuales son establecidas a través de Resoluciones Ministeriales (RM). En el 2003, mientras la pesquería estuvo cerrada por recomendación IMARPE y un Grupo Internacional de Expertos, el PRODUCE renovó las normas que regulan la pesca de merluza a través de un Reglamento de Ordenamiento Pesquero específico, aprobado con Decreto Supremo N° 016-2003-PRODUCE con el objeto de reducir el esfuerzo pesquero y lograr su recuperación a niveles sostenibles en el mediano plazo mostrando buenos resultados. A través de RM se establecen regímenes provisiones de pesca de merluza definiendo una cuota total de captura la cual se asigna a embarcaciones industriales y se definen condiciones para su extracción. Las embarcaciones artesanales no tienen cuota de pesca y no están sujetas a prohibiciones relacionadas con zonas de pesca, pero deben respetar las épocas de veda y cumplir algunos requisitos, entre ellos no proveer sus capturas a plantas procesadoras y solo pueden comercializar su producto como freso/refrigerado. Estos aspectos generan conflictos entre ambos actores por posible ocurrencia de pesca INDNR por parte de embarcaciones artesanales y por otro lado la restricción de desarrollo productivo del recurso a través de la pesca artesanal.

Session Date: Wednesday 12 September 2018

Presentation Title: User rights; Conflicts between Sri Lanka's small scale fishermen and mechanised trawlers in Northern Sri Lanka

Presenter: Sashini Fernando

Sri Lanka is an island state consisting of a 1340 km long coastline and claims sovereign rights of 223,000 km² of Exclusive Economic Zone (EEZ) of the Indian Ocean. The open access nature of the fishing grounds has expanded fishing effort over the years, with over 1,023,780 individuals depending on income gained through fishing related activities. The small scale fishing boats used in the coastal fishery usually consists of non motorised and motorised vessels reaching average lengths between 4 to 14m. Fibreglass reinforced plastic boats powered by outboard motors ranging between 15-25hp are used to carry out gill-net, longlines and hand-line fishing operations. Multi-day 3.5 ton fishing boats are 8-9 metres long and equipped with two cylinder diesel engines of 25-30 hp. Fishermen in Northern Sri Lanka depend on traditional boats and gear such as nets and hand-lines due to the shallow nature of the fishing grounds. These fishermen compete for resources with over 5000 south Indian large-scale mechanised bottom trawlers that illegally cross the Indo-Sri Lankan Maritime Boundary, breaching the treaty signed by both countries in 1976. The Fisheries and Aquatic Resources Act No 2 of 1996 has been adopted for Sri Lanka's overall fisheries management. Restriction of destructive fishing practices and gear have been implemented through the Sri Lanka National plan of action to prevent, deter and eliminate Illegal, Unreported and Unregulated (IUU) fishing. Therefore, industrial scale bottom trawlers have left the local fishermen with reduced fish stocks, destroyed marine habitats and gear. Creating severe conflict between scale of fisheries and neighbouring countries. This case study discusses and proposes the use of environmentally friendly fishing methods such as size segregated (SS) pole and line fishing and introduction of modernised gear as a solution to mitigate the conflict.

Session Date: Wednesday 12 September 2018

Presentation Title: Conflicts (or Competition) between fisheries and regions in Korea

Presenter: YoungTae Shin

Korea Fisheries industry has long history. But it has developed drastically since early 1960s. As a result of this fast development, some conflicts or competitions has happened between fisheries and regions. The typical conflicts between fisheries is that of large otter trawl fisheries and off shore angling fisheries. The other conflicts causes between Gyongnam and Chonnam regions especially in anchovy drag net fisheries. But theses conflics continues in spite of government's efforts to solve

Session Date: Wednesday 12 September 2018

Presentation Title: Fisheries Economic Institute in National Federation of Fisheries Cooperatives

Presenter: JoonMo Park

There are three types of fisheries disputes in Korea, between fishing and offshore fisheries, between coastal fisheries, and regional disputes by maritime boundaries. The Fisheries Act and the Fisheries Resources Management Act distinguish fishing areas between offshore and offshore fisheries. However, there have been cases in which offshore fishing vessels have invaded the fishing area due to the formation or movement of fishing grounds, and disputes between offshore fishing and coastal fishing are continuing. And disputes between coastal fishing are continuing, cause of many types of coastal fishing vessels operating on a limited fishing ground. Recently, there have been cases of regional fishing disputes depending on how the ocean boundaries are made. In this presentation, I examine the process of dispute settlement of fisheries fishing, between offshore fisheries and coastal fisheries, between coastal fisheries and between regional fisheries disputes.

Session Date: Wednesday 12 September 2018

Presentation Title: Implementation of User Rights in the Fisheries of Lake Albert-Uganda

Presenter: Presenter: Daisy Olyel Aciro

This paper presents the fisheries user right system that is practiced in Lake Albert in Uganda. The Lake Albert fishery is an open access fishery by all standard. Controls are implemented in the fishery through issuance of Licenses. These Licenses are issued on an annual basis and they are species specific meaning for which ever species a fisher intends to fish; the fisher has to own a license for. The processes of issuance of Licenses involves the registration of the fishers and also application by the fishers expressing their interest to operate in the kind of fishery for which a license is issued. In order to get licenses, the fishers have to log online. Therefore, the kind of licensing is referred to as e-licenses. Since the fees collected are deposited in the government consolidated fund, the fishers require tax identification numbers before they can log on to the licensing portal.

Licenses are given on a first come first served basis and the amount of fee is directly charged(taxed) on the transport vessels for fish and fisheries products. Before fishers are given licenses, they are vetted to remove those in possession of illegal fishing practices. Research noted in 2006 that the decline in the stocks of fish in the main water bodies, Lake Albert inclusive is mainly due to the increased number of illegal fishing practices in these water bodies. Therefore, the government withdrew fisheries Licensing from the Local Government back to the central Government (Ministry of Agriculture, Animal Industry and Fisheries). Therefore, the Ministry since 2008 had the Licensing system re- strategized with the main objective of reducing illegal fishing activities thereby rebuilding the declining stocks.

This paper therefore acknowledges that much as User Rights are exclusive in nature, the practice in the Ugandan context in the fisheries licensing system is very important for promotion of sustainable fisheries management. Not forgetting that it is very expensive in both time and finances. In addition to those two disadvantages, it is also socially exclusive in that those who cannot pay for the licenses are pushed to fish illegally. None the less, it indeed can contribute to the sustainable exploitation of the fisheries resource thus supporting several of the Sustainable

Development Goals (SDGs) most especially goal 14 (1) which advocates for the Global protection of aquatic life which is very important for human life on earth.

Session Date: Wednesday 12 September 2018

Presentation Title: Aménagement des ressources pélagiques côtières transfrontalières dans la région nord-ouest africaine

Presenter: Birane Sambe

La gestion efficace des stocks de petits pélagiques est l'un des plus grands défis que rencontrent les pays bordant l'océan atlantique du nord-ouest (le Maroc, la Mauritanie, la Gambie et le Sénégal). Ces ressources migratrices sont réparties dans les Zones Economiques Exclusives et sont partagées par deux ou plusieurs pays. Elles constituent de loin les plus grandes pêcheries, tant en termes de biomasse que de volumes de capture, et elles sont importantes pour la sécurité alimentaire et nutritionnelle en Afrique. Le Sénégal et la Gambie de même que la Mauritanie, dans une certaine mesure, ont des flottes artisanales importantes et dynamiques. Le Maroc et la Mauritanie ont d'importantes flottes côtières et industrielles, tandis que les navires industriels internationaux y opèrent à travers des arrangements variés. Dans le même temps la pêche illicite, non déclarée et non réglementée est un problème dans la région. La contribution du secteur de la pêche maritime à l'économie nationale est importante. Cette pêche apporte des contributions significatives à la sécurité alimentaire, des revenus et des emplois. La biomasse des espèces de petits pélagiques varie significativement particulièrement à cause des changements hydro-climatiques. De récentes évaluations des ressources indiquent que certains de ces stocks sont surexploités. De plus, la demande pour cette ressource par l'industrie de farine de poisson est également en augmentation. Les facteurs et les conditions ci-dessus associés à la problématique des droits des usagers sur ces ressources transfrontalières présentent des défis considérables et ont des conséquences sur la viabilité de cette pêche de petits poissons pélagiques et la gestion efficace de l'exploitation et de l'utilisation durable de ces ressources. Ainsi des accords appropriés qui mettent l'accent sur la coopération et la collaboration entre les pays partageant la ressource et prenant en compte le principe de précaution auraient besoin d'être considérés pour ces pêcheries.

Session Date: Wednesday 12 September 2018

Presentation Title: Complications of designing tenure rights systems for highly migratory fisheries

Presenter: Vishwanie Maharaj

A World Bank/Global Environmental Facility funded project aims to explore the potential for incentive based tools and third-party financing to improve the performance of highly migratory fisheries with a high seas component (ABNJ fisheries). Under this World Bank project, the World Wildlife Fund-US (WWF-Inc.) is responsible for an Eastern Pacific regional project that proposes a rights based management component to address catches of bigeye and yellowfin tunas in the Eastern Pacific tuna purse seine fleet. This presentation focuses on the on-the ground realities of designing a rights based management program for a highly migratory fishery with a high seas component. Agreement on allocation is complicated by the multilateral decision making process and a stepwise approach with specific design features to accommodate new entrants is important. This presentation also covers other design features to address the aspirations of developing coastal states with a real interest to increase participation in the fishery. While the paper is focused on the Eastern Pacific case, our findings are relevant for other tuna producing regions depending on the context as tuna fisheries are heterogenous across many dimensions that include: vessel size, catch composition on the high seas versus exclusive economic zones, value chain complexity, current value and potential post transformational value, strength and capacity of governance institutions and other enabling conditions for reform.

Session Date: Wednesday 12 September 2018

Presentation Title: La Experiencia del Tratado del Río de la Plata y su Frente Marítimo entre Argentina y Uruguay

Presenter: Daniel Gilardoni

El Tratado del Río de la Plata y su Frente Marítimo, firmado en 1973 por Argentina y Uruguay, estableció una zona común de pesca (ZCP) para ambos países. Constituyó además la Comisión Técnica Mixta del Frente Marítimo (CTMFM), organismo intergubernamental pesquero integrado por Argentina y Uruguay, cuyo cometido es realizar estudios y adoptar medidas, para la conservación y racional explotación de los recursos vivos y la protección del ambiente marino en la ZCP. Por un acuerdo con la Comisión Administradora del Río de la Plata, esta delegó en la CTMFM parte de sus competencias para la investigación pesquera y la gestión en toda el área del Tratado. En los últimos diez años la CTMFM ha realizado significativos avances en la implementación de decisiones de manejo basadas en ciencia, aplicando el enfoque ecosistémico para el manejo de las pesquerías del área. La Comisión recibe anualmente el asesoramiento científico de seis grupos de trabajo sobre el estado de recursos pesqueros y el ambiente, contando entre otros insumos con la información colectada por barcos de investigación de los países parte. Al mismo tiempo, promueve actividades científicas y capacitación para los investigadores de los dos países. En su área se capturan más de 70 especies de peces y moluscos, correspondiendo el 90% de los volúmenes desembarcados a especies que cuentan con medidas de manejo tales como captura total permisible, áreas con restricción del esfuerzo pesquero, áreas de veda espaciales y temporales, tallas mínimas de desembarque, entre otras, basadas en el asesoramiento científico. Los barcos pesqueros que operan en el área del Tratado deben contar con una licencia válida otorgada por uno de los dos países parte, estar equipados con un Sistema de Localización de Buques y reportar a la autoridad pesquera la información de sus actividades y capturas (partes de pesca), entre otras obligaciones.

Concurrent Session 7

History and experiences with **multiple use in coastal zone management and rights** (aquaculture, MPAs, tourism, etc)

Session Date: Wednesday 12 September 2018

Presentation Title: Namena Marine Reserve; Best Practices and Lessons Learnt

Presenter: Alisi Rabukawaqa-Nacewa

The Namena Marine Reserve was founded in 1997 to ensure the conservation of the marine resources that are in the customary fishing grounds of the indigenous people of Kubulau district, in the province of Bua in Fiji. These villagers adjacent to the MPA, owns the traditional fishing rights (qoliqoli) of the Namena Barrier Reef, on which they depend for their livelihoods and this had been mainly subsistence fishing. An increase in commercial fishing in the 1980's and 1990's posed a serious threat to Namena's reefs. The response by leaders from the 11 villages in the district placing a total ban on fishing, through the creation of the Namena Marine Reserve representing a significant portion of the overall qoliqoli area not only addressed the growing problems of poaching in the qoliqoli and depleting fisheries', but offered an alternative means of economic development for villagers who were mainly reliant on fishing. This was through various efforts were undertaken to tap into tourism's potential, including the establishment of a [voluntary contribution] charged to individuals diving in the Namena portion of the Qoliqoli. The Marine Reserve has become a great example of indigenous people's with tenure rights in fisheries in Fiji, spearhead solution-based approaches to the growing problems of poaching in the qoliqoli, as well as depleting fisheries. Today, the Namena Marine Reserve is seen as a world class SCUBA destination but the journey has not been without its challenges in particular, how the Namena Marine Reserve can continue to prioritize the health of its ecosystem and continue to rate as a "premium destination" and leveraging the Marine Reserve to facilitate positive, community driven economic development in the region.

Session Date: Wednesday 12 September 2018

Presentation Title: Small scale fisheries of Sierra Leone

Presenter: Kamara Kadiatu Seaport

The Small-Scale fisheries of Sierra Leone is comprising mostly men dominate, but majority of women are in the post-harvest sector though some are financier and boat owners. There are approximately 18,000 artisanal fishermen and over 11,000 fishing canoes in the sector which is operated by local Ghanaian types of canoes made from dug-out and plank with an onboard engine of 8-40HP. The sector is characteristically labor intensive with mostly traditional methods of fishing, conversely, it sometime mechanize with the use of small boats involving traditional fishing gear, such as gillnets, cast nets, beach seines, purse seines, ring nets, traps and hooks and hand collection method.

The artisanal fisheries accounted for about 80% of the total marine fish landings. In the year 1982, the total marine artisanal production was about 35,000mt with more that 70% consisting of small coastal pelagic species. The catch of the artisanal fisheries mainly consists of small pelagic species (Sardinella and Ethmalosa).

Amidst the vibrate nature and the prospect of the artisanal fisheries sector this presentation highlights challenges such as Illegal Unregulated Unreported (IUU) fishing, Management of Marine Protected Areas, the licensing of artisanal canoes as fishing crafts and attendant gears to name a few, that require urgent management attention or else could implead the progressive activities of the sector.

Session Date: Wednesday 12 September 2018

Presentation Title: Áreas de Manejo y Explotación de Recursos Bentónicos AMERB de Locos (Concholepas concholepas), en la región de Los Lagos, Chile

Presenter: Jürgen Betzhold Formigli

A partir del año 1997, el Estado de Chile, ha implementado las Áreas de Manejo y Explotación de Recursos Bentónicos (AMERB). Tal régimen, consagrado en la Ley General de Pesca y Acuicultura, otorga derechos de uso o explotación exclusiva sobre los recursos bentónicos (invertebrados bentónicos y algas), a organizaciones de pescadores artesanales, legalmente constituidas, previa aprobación de un plan de manejo basado en la sustentabilidad de los recursos presentes en dicho territorio. Este régimen ha logrado, por un lado, regular el acceso a las pesquerías bentónicas y propender a la conservación de estos recursos; fomentar la consolidación de las organizaciones de pescadores y su capacidad de gestión, logrando que se recuperen los niveles de producción de las áreas entregadas, así como también, que los pescadores mejoren sus beneficios a través de una gestión comercial organizada (el manejo, explotación y comercialización del recurso); y finalmente ha generado una nueva forma de gobernanza, entre el ente administrador y los usuarios en el territorio. Desde el establecimiento de los primeros sectores AMERB y con más de 20 años de implementación, es posible afirmar que éste ha sido valorado por las organizaciones de pescadores artesanales, dado que por un lado han propendido a la conservación marina de sus espacios, así como el positivo desarrollo económico y social de los asentamientos de pescadores artesanales. Sin embargo, quedan aspectos que mejorar, como es la seguridad, costos que deben asumir las organizaciones, el efecto precio al haber una mayor oferta de recursos, etc. El presente trabajo resume el estado actual de la implementación de las AMERB en el sur Chile, focalizado el caso en la región de Los Lagos, en la pesquería asociada y autorizada en los planes de manejo sobre el recurso Loco (*Concholepas concholepas*) molusco de alto valor comercial para los pescadores artesanales.

Session Date: Wednesday 12 September 2018

Presentation Title: Solution and competition of using fishery resources between commercial fishing and recreational fishing in Korea

Presenter: KwangNam Lee

낙시이용권제 문제는 약 40년 전부터 정부차원에서 검토되어 왔으나, 낙시관련 단체의 반대 및 여건 미성숙 문제 등으로 인해 아직 시행되지 못하고 있는 실정이다. 그러나 국민 소득수준의 향상과 레저의 사회경제적 증가에 기인하여 국내 낙시 인구는 지속적으로 증가하고 있고 이에 따라 수산자원에 대한 어업인과 낙시인간의 경합문제가 대두되고 있다. 낙시인을 위한 바다 등과 같은 낙시터는 수산업에서 어업을 위한 공간과 동일하며, 어업의 경우 면허·허가·신고를 받은 어업인만 공유자원인 수산자원의 포획·채취가 가능하나, 낙시인은 일부 제한되는 사항을 제외하고는 누구나 자유롭게 수산자원의 이용이 가능함에 따라 과도한 낙시로 인해 자원감소에 따른 낙시인과 지역 어업인 등과 마찰이 심화되고 있다. 2016년 기준 연근해 어획량은 96만톤으로 1972년 이후 처음으로 100만톤을 넘지 못하였고 연근해 어획량 중 상위를 차지하고 있는 멸치, 오징어 등 낙시 주요대상이 아닌 어종을 제외 후 고려하였을 때, 낙시로 인한 수산자원이 이용량이 매우 큰 것으로 추정된다. 약 10여 년 전부터 낙시면허제에 대한 심도 있는 검토가 이루어져 왔으나 낙시관련 및 육성법(2013.9.10.시행)에서는 낙시이용권제에 대한 법적 근거가 포함되어 있지 않아 동 문제에 대한 관리방안을 도입하지 못하였다. 본 연구에서는 어업인과 낙시인간 수산자원 경합문제의 주요원인이 되는 갈등유발어종을 도출하고, 실제 경합 문제를 심층적으로 조사, 분석하여 경합적인 수산자원 이용에 대한 근본적인 해결방안을 모색하여 이에 대한 관리방안을 마련하고자 한다.

Presentation Title: Two institutions for one fisheries management? Pooling system and individual operation in Wagu spiny lobster fishery

Presenter: Hiroe Ishihara

We studied lucrative spiny lobster fishery in Japan operating under Territorial Use Rights in Fishery (TURF) and unique two-part institutions; i) pooling system and ii) individual operation. In first half of the season, i.e. during the pooling system, when crowding inefficiency can be the greatest, this fishery operates as a group, i.e., full spatial fishing effort coordination, and share the total revenue equally among the fishermen. In second half of the season, i.e. during the individual operation, the fishermen switch to individual-based regulated open access (ROA) operation. The two institutions operate within its designated and mutually-exclusive fishing zones, and the area of group operation zone has gradually expanded over the years by taking ROA zones away. This case-study poses a fundamental question regarding the fisheries management, “why fishermen chose two separate management systems, i.e. institutions, for one fishery management?”. Using a unique dataset of individual vessels’ harvest volume and locations from 1991 to 1997 (i.e. prior to the introduction of the current regime), we argue that fishing grounds that had yielded a higher share of the catch at the beginning of each season were often designated as fishing ground for pooling system. Further by using semi-structured interviews to all fishermen, we reveal that individual operation plays a vital role in reducing the discontent of younger fishermen and fostering the necessary shared understanding of the socio-ecological condition for pooling system.

Session Date: Wednesday 12 September 2018

Presentation Title: Who's custom is important? A case of conflict among multi-layered customary rights groups for fishing in Okinawa, Japan

Presenter: Aoi Sugimoto

I introduce a case study of Shiraho village, Okinawa Japan as a conflict case among multi-layered customary rights groups for fishing activities. Japanese Fisheries Cooperative Associations (FCAs) have been regarded as one of the world oldest and best-established fisheries institution that involve resource users for coastal resource management (Pomeroy and Berkes, 1997; Makino, 2011). In Okinawan islands -the most southwestern part of the country-, however, there was a different history of establishment of common fishing rights and FCAs. Common fishing rights were granted to the FCAs consisting of Itoman fishers -professional fishers group based on Okinawa island-, not to the coastal villages in Okinawa (Kumamoto, 1995). Shiraho village is located in the southeastern part of Ishigaki Island, Okinawa. The village lagoon has been utilized by local farmers-fishers for subsistence activities for a long time (Tabeta, 1990). However, the common fishing rights are not granted to the Shiraho Village but to Yaeyama (the name of a district in Okinawa that includes Ishigaki Island) FCA that mainly consists of Itoman fishers, just like other Okinawan coastal villages. This multi-layered user rights system resulted in a serious conflict over the airport construction plan on the village lagoon which was declared in 1979 by the Okinawa government. Residents of Shiraho village fought against that construction plan for over 20 years. The government and FCA consistently pushed the plan, while the local community consistently opposed to the plan during this period. Thus, the Shiraho airport conflict became a battle between governments, FCAs, and local residents because the fishing rights have been granted to the FCA consisting of Itoman fishers. This case indicates the complexity and dynamism of customary rights for fishing activities, and the potential risk of institutionalization of customary rights which could result in a serious conflict among multi-layered customary rights groups

Session Date: Wednesday 12 September 2018

Presentation Title: Gaps in the traditional and legal ownership of marine resources in the Marshall Islands

Presenter: Maria Sahib

Traditionally, the ownership of the coastal resources of the Republic of the Marshall has always lain with the coastal communities. The coastal resources management, by law, requires the national authority to take measures for the management and development of local fisheries including in internal waters and within five miles (which is the local jurisdiction) of the baselines from which the territorial sea of any atoll or island is measured. However, before any measures are taken, the national authority should consult with the Local Government Council affected by the proposed measures and as appropriate convene public hearings. However, jurisdiction, power and responsibility of traditional landowners with respect to Biodiversity resources are ambiguous. Different atolls have different traditions as to where land and marine ownership is claimed-some claim ownership from the land to the ocean as far as the eye can see. Others claim ownership of marine resources and reefs may be on the opposite side of the atoll from the land. Although powers and responsibilities associated with ownership are not formally defined in law, or tested in the court system, traditional resource owners hold considerable power over the use of the resources, de facto. In this sense, a gap analysis would be done to identify in what form and shape and how wide the gap is, and a set of recommendations to close the gap. The research will be based on the 24 outer island and similarities and differences in the traditional and legal structures would be identified.

Concurrent Session 8

Social aspects of tenure and user rights
in fisheries (human rights, right to food,
gender, Indigenous Peoples, youth)

Session Date: Wednesday 12 September 2018

Global Conference-Tenure & User Rights in Fisheries 2018: Achieving Sustainable Development Goals by 2030

Abstracts

Presentation Title: Competing Stakeholders' in Small Scale Fisheries (SSF): A Case Study from Nigeria

Presenter: Stella Williams

Abstract Nigeria is one of the maritime nation in West Africa. Her general economic data related to fisheries includes an area of 923,768 kilometer square and a continental shelf are Of 37,934 kilometer square. The length of her coastline is about 853 kilometers, while her Exclusive Economic Zone (EEZ) is 210,900 kilometers long. Her population is 187.3 million (2015 Censor) with a population growth rate of 3.2%. Contribution of Agriculture to GDP (2015) is 22% while the contribution of fisheries to Agriculture GDP (2015) is 0.88%. Currency Exchange rate is (20145 \$1_N350. Total fish demand (2015) 3.25 m Mt while her fisheries domestic production is estimated at 1,027m Mt. The per caput consumption is 17.5 kilogram while her average employment in the primary sector is 8,632 million; average employment secondary sector is estimated as 8.1 million (male), 20.2 million (female). Of note here is the fact that women do fish in Nigeria and so the gender perspective in the fishing communities is of great significance and critical in terms of its value chain contributions to the economic growth. Total import of fisheries products in 2015 was 806,000 Mt compared to her total export in the same year (2015) of 4,256 Mt. The value of fish import in 2015 in USD (\$) was \$1,126,428,414.41; Value of fish export in 2015 in USD (4) was \$56,067,915.00. Hence, in terms of the discussion of tenure and fishing rights in SSF in Nigeria research studies have shown that women do fish and therefore play a very significant and critical economic role in SSF vis-à-vis tenure and fishing rights.

Session Date: Wednesday 12 September 2018

Presentation Title: Tenure and the Garifonas in Honduras: preparing abstract

Presenter: Graciela Pereira

Los garífuna son un grupo étnico descendiente de esclavos africanos, que naufragaron en la isla de San Vicente en 1635 y aborígenes caribeños. Se estima unos 600.000 pobladores en Honduras, Belice, Guatemala, Nicaragua, y EEUU. Honduras cuenta con 6 etnias, 92.000 personas distribuidas en 46 comunidades en la Costa del Caribe. El garífuna cultiva guineo, plátano y yuca, siendo el pescado su alimentación básica. Hasta el año 1992, las comunidades garífunas, tenían título de ocupación de las tierras. En ese año, el Gobierno hondureño emitió la LEY PARA LA MODERNIZACION Y DESARROLLO DEL SECTOR AGRICOLA. El Estado hondureño se rehúsa a reconocer su condición de pueblo indígena y le niega el derecho a la tierra. Sin embargo, no se trata únicamente de que el Estado legalice las tierras a favor de las comunidades garífunas, sino que garantice y asegure sus derechos sobre las tierras que fueron tituladas. Las mujeres se dedican principalmente a la venta de pescado en los mercados, hoteles, restaurantes y a los turistas les venden pescado preparado (frito). Últimamente están siendo desplazadas de la zona costera donde elaboran sus productos por el auge de la industria hotelera y turística creciente en la región. Esto fue observado por INFOPESCA en la bahía de Tela cuando fue aprobado un megaproyecto turístico. Algunos líderes y dirigentes de las comunidades garífunas de la zona, se ha dejado deslumbrar por la promesa de que serán socios en este megaproyecto y el gobierno les entregaría un fidecomiso para que accedan a ser socios. La proliferación creciente de proyectos agroindustriales, turísticos, hidroeléctricos y mineros, sumado a la presencia del narcotráfico y el crimen organizado, provocó la desaparición de algunas comunidades y atenta contra la supervivencia del pueblo garífuna.

Session Date: Wednesday 12 September 2018

Presentation Title: Influence of Women involvement in fisheries Socio-economics in a Coastal Fishing Community in Ambalangoda, Southern province of Sri Lanka

Presenter: Walpita Gamage Inoka Lakshmi

The present study was carried out to evaluate the impact of involvement of women in fisheries on the socio-economics of fisher households in Hirewaththa and Patabandimulla two fishing villages in Ambalangoda, Southern province of Sri Lanka. Households for the study were selected after a preliminary survey. Households were separated into two categories based on the level of women's participation in fisheries. Hundred households from each category (families in which women were involved in fisheries and not involved in fisheries) were randomly selected and the information were collected using a questionnaire survey. The information on socio-demographics such as civil status, religion, family size, literacy level of women, school attendance of children, nature of the house, daily activities of women, household income, willingness to participate in fishing activities and whether they were descendants from fishing families and information on barriers and opportunities in doing fisheries activities were collected. The results indicated that there were significant differences between the two groups with regard to family size composition, literacy level, education of the children, monthly income, regular liquor consumption habits of husbands and loan taken from the banks and repayments ($p < 0.01$). Housing conditions of two categories showed significant differences ($p < 0.05$). No women in the village engaged in pre-harvest activities and catching fish. Of the women involved in fisheries, about 44% involved in fish processing activities such as gutting, salting, sun drying and *jaddy* preparation which about 70% involved in gutting fish. About 12% involved in marketing the catch, 26% involved in removing fish from the small meshed gill-nets and 10% involved in collecting fish in to transportation baskets. The balances involved in the ancillary support services, 5% of women engaged in providing foods and 3% of women engaged in supply fuel for the boats. The women labour of those involved in salting and drying and collecting fish into transportation baskets found to be exploited with gender discrimination. The present study indicated that even though the households where women were involved in fisheries earn a higher income it appeared that the living conditions of the two groups were similar. This may be mainly due to low literacy rate, large family size composition and loans taken from the bank among the women involved in fisheries. This suggests that it is necessary to carry out social development programs to enhance their living standards.

Session Date: Wednesday 12 September 2018

Presentation Title: Experiencia mexicana sobre género y tenencia

Presenter: Verónica Esquivel

México cuenta con 11 mil 500 kilómetros de litoral, 12 mil 500 kilómetros cuadrados de sistemas costeros y marinos y seis mil 500 kilómetros cuadrados de aguas interiores, en los que se generó en 2017, una producción de 1 millón 800 mil toneladas de pescados y mariscos, representando una alternativa para superar la pobreza alimentaria y nutricional. Debido a la importancia de la actividad, el Programa Sectorial de Desarrollo Agropecuario, Pesquero y Alimentario, establece la promoción de un desarrollo más equilibrado, tanto en lo productivo como en lo social, en el uso sustentable de los recursos naturales y en la justa retribución de los productores, así como en garantizar la seguridad alimentaria del país, para lo cual se delinearon cinco ejes de políticas pesquera y acuícola. En este marco, la pesca es uno de los sectores más prometedores en México, ya que los pescadores de las comunidades ribereñas contribuyen en la creación de empleos, generación de divisas y aportan productos de alta calidad al sector alimentario, y en el caso específico de las mujeres desempeñan un papel de suma importancia para el desarrollo de la actividad a nivel nacional, con un incremento de participación en las distintas tareas como la elaboración de las artes de pesca, capturas, distribución y comercialización, así como en darle valor agregado del producto. El sector pesquero y acuícola mexicano (producción primaria y procesamiento), participan más de 22 mil mujeres, que significan el 9% de las personas (hombres y mujeres) que se dedican a la pesca y acuicultura registrada. En la presente administración, se ha incrementado la proporción de presupuesto destinado a las mujeres. En 2017 se destinó el 12.7% del total del presupuesto (237.0 MDP), cifra superior en comparación con la administración pasada cuando se canalizó el 1.4% (36.0 MDP). Durante los últimos 5 años se han beneficiado 16 mil mujeres.

Session Date: Wednesday 12 September 2018

Presentation Title: Sustainable community fisheries management: a case in Cambodia

Presenter: Hiroe Ishihara presenting on behalf of Sopha Lieng

In Cambodia, small-scale fisheries are the major fishery which utilize almost the entire inland waters. Livelihood of millions of rural people highly depends on fisheries and its related activities. In 2001, small-scale fishers have been granted new user rights with the revised legal framework from the Cambodian government to fish in their exclusive fishing zones which would improve their livelihood and encourage their participation in sustainable fisheries management. Totally, 516 community fisheries have been established throughout inland and marine waters. There are only 39 community fisheries in coastal area. This study presents the case of Koh Keo community fisheries in Tonle Sap floodplain, Kampong Chhnang Province. Despite of some challenges in the implementation of community fisheries management, it is the ways toward maintaining sustainable fisheries and equitable distribution of fishery resources. Community fishers play very important roles to fisheries management and conservation. The study also discussed the changes of livelihood of the community fishers and impact on the community fisheries after the application of new user rights.

Session Date: Wednesday 12 September 2018

Presentation Title: Improvement of membership issues of fishing village for continuous development of fishing community in Korea

Presenter: KwangNam Lee

어업인의 감소, 고령화로 인해 어촌계가 존립하기 어려운 사례가 발생하고 있으며 현재의 어촌인구 감소 추세라면 향후 어촌계의 존립에 대한 우려도 커지고 있다. 2017년 어가 경영주의 평균 연령은 63.7세이며 어가의 고령인구(65세 이상)의 비율은 35.2%로 2016년에 비해 2.6%가 증가하였다. 어가인구는 12만 2천명으로 매년 감소추세를 보이고 있다. 어촌인구의 감소는 어촌의 사회적 복지서비스 약화, 공간 과소화 및 공동화를 유발하고 이는 다시 어촌인구의 감소로 이어지는 악순환을 유발한다. 따라서 어업인의 고령화 및 감소로 인한 어촌의 외형적 규모 축소는 수산업의 존속기반을 저해하는 요인으로 고려된다. 이러한 어촌사회의 지속적인 발전을 위해서는 어촌계라는 어촌커뮤니티를 유지할 수 있는 인적자원의 확보가 우선적으로 중요하며 어촌의 신규인력 가입을 위한 노력이 필요하다. 그러나 현재 어촌계 가입조건은 수협법상 조합의 조합원에 한해 어촌계 가입이 가능하도록 되어 있어 조합원으로 먼저 가입이 되어야하는 이중 가입조건 구조를 가지고 있다. 또한 수협조합원 자격을 얻기 위해서는 어업인으로서의 확인이 가능해야하나 어업실적이 없는 신규 어업희망 귀어인과 어촌계운영 및 관리에 필요한 전문가 등은 원칙적으로 어촌계 가입이 제한되어 있다. 또한 어촌계 내부의 배타성과 지분 확보의 측면이 강한 점 또한 어촌계의 신규 가입을 어렵게 하고 있는 실정이다. 실질적으로 어촌계의 운영은 수협과는 독립적인 관계에 있다고 봐야함에도 불구하고 어촌계 가입 자격이 수협의 조합원으로 규정되어 있는 점은 신규 희망귀어인의 귀어에 어려움을 겪게하여 어촌계의 지속성 증대를 저해하는 문제점으로 나타난다. 본 연구에서는 한국어촌사회의 현황 파악과 문제점을 진단하고 어촌사회의 지속적인 발전을 위해 어촌계원 가입문제에 대한 해결방안을 모색을 통해 신규 인력의 어촌계 진입을 활성화하고 이를 기반으로 미래지향적인 어촌사회 발전을 위한 정책제언을 한다.

Session Date: Wednesday 12 September 2018

Presentation Title: Two institutions for one fisheries management? Pooling system and individual operation in Wagu spiny lobster fishery

Presenter: Hiroe Ishihara

We studied lucrative spiny lobster fishery in Japan operating under Territorial Use Rights in Fishery (TURF) and unique two-part institutions; i) pooling system and ii) individual operation. In first half of the season, i.e. during the pooling system, when crowding inefficiency can be the greatest, this fishery operates as a group, i.e., full spatial fishing effort coordination, and share the total revenue equally among the fishermen. In second half of the season, i.e. during the individual operation, the fishermen switch to individual-based regulated open access (ROA) operation. The two institutions operate within its designated and mutually-exclusive fishing zones, and the area of group operation zone has gradually expanded over the years by taking ROA zones away. This case-study poses a fundamental question regarding the fisheries management, “why fishermen chose two separate management systems, i.e. institutions, for one fishery management?”. Using a unique dataset of individual vessels’ harvest volume and locations from 1991 to 1997 (i.e. prior to the introduction of the current regime), we argue that fishing grounds that had yielded a higher share of the catch at the beginning of each season were often designated as fishing ground for pooling system. Further by using semi-structured interviews to all fishermen, we reveal that individual operation plays a vital role in reducing the discontent of younger fishermen and fostering the necessary shared understanding of the socio-ecological condition for pooling system.

Session Date: Wednesday 12 September 2018

Presentation Title: Toward Managed-Access Approach to Sustain Sustainable Small Scale Fisheries Management in Southeast Sulawesi, Indonesia

Presenter: Handoko Susanto

Management approach that provides coastal communities with exclusive access privileges for fishing in defined areas, and in which protected areas are established inside or adjacent to these exclusive access areas. Understanding the need to recover fisheries in Kolono Bay, Indonesia, communities from five villages came together and agreed to establish 974 hectares of managed-access area along with 50 ha of marine reserve (managed-access with reserves). A community management body was established to manage the area and enforce agreed-upon rules such as fishing zone and fishing gears. Two years after the agreement to use managed-access with reserves in Kolono Bay, fish biomass increased by 16% on average, the coral cover in the area slightly improved, community knowledge of sustainable fishing improved, and compliance with regulations increased. Building on this success, the Government of Southeast Sulawesi Province plans to replicate managed-access with reserves across the province's waters. However, to ensure it will be an effective solution to overfishing in areas outside Kolono Bay, thorough and systematic site selection must take place. Site selection criteria must include type of fisheries targeted, socio-cultural dimensions, community and government acceptance, seascape and other spatial issues. Ideally, the criteria will help assess and identify likeliness of managed-access with reserves to be successful, and identify potential challenges early in the planning and implementation phase. This case study elaborates the establishment of managed-access with reserves in Kolono Bay, Indonesia, as an example of community-based small-scale fisheries management, and the effort by the provincial government to scale-up the solution to a province wide initiative.

Session Date: Wednesday 12 September 2018

Presentation Title: Adapting a fishing fleet to conflicting goals

Presenter: Jan Frederik Danielsen

Fish has for centuries been a backbone in the Norwegian Economy, and a major export commodity for more than 1000 years. To day, the Norwegian seafood industry is highly effective and profitable, resting on two legs; salmon aquaculture and fishing. The capture sector has though kept structural remains from times bygone. How the fisheries has changed over a period of 70 years with the reduction of fishermen from 110.000 to 8.000 with only marginal social costs, will be reviewed. Over the last 20 years, the Government has introduced measures aiming at transforming the capture sector to address the challenges facing a modern fisheries industry; sustainable fishing, profitability and contributing to maintaining livelihood and jobs in marginal coastal areas. The Norwegian Marine Resource Act states that the living marine resources in Norwegian waters, similar to the petroleum and gas resources and water resources for hydropower, belongs to the people of Norway. It is an obligation of the Government, as the custodian, to manage the resources for the benefit of the society. The resource rent generated from the exploitation of the fish resources has, in contradiction to from petroleum, gas and water, not been taxed. The resource has until today been used to maintain a larger number of vessels and fishermen than necessary to fish the resources. The resource rent has thus been contributing to maintain the habitation coastal areas. The structural measures introduced in the late 1990-ies have however changed the sector. Today, the resource rent is to a large extent accumulated in the price of the fishing licenses. Consequently, the resource rent are leaving the sector with the fishers who are selling their bout with fishing licenses. The Norwegian Government are currently revising the fishery policy to safeguard that the fisheries sector will increase its contribution the Norwegian society

Session Date: Wednesday 12 September 2018

Presentation Title: Delineating Municipal Waters and Establishing Managed Access Areas in the Philippines

Presenter: Dennis Calvez presenting on behalf of Paolo Domondon

In the Philippines, under a decentralized federal government, the authority to manage municipal waters is devolved to the Local Government Units (LGUs) contingent on their adoption of an ordinance delineating municipal waters. LGUs are legally mandated to delineate their waters out to 15km from shore. These waters are considered to be an important natural asset of the 1.8 million registered fisherfolk in the country. Coastal cities or municipalities having gone through this delineation process have jurisdiction over their own waters, including protection of habitats, management of coastal and fishery resources, identification of fishery management tools, and channeling of resources to sustain these efforts. Currently, the Philippines is far beyond the target of delineating waters and providing the use and management of these resources to the small-scale fishers. Rare, a global conservation and development non-profit, works with and supports these municipalities under a global fisheries program called Fish Forever. Critical to the program is securing authority of local governments to manage municipal waters through delineation and promoting establishment of managed-access fishing areas both in and outside of National Protected Area Systems. Managed-access is a form of Territorial Use Rights for Fishing (TURF) and is a well-known solution to address overfishing and transition from open-access fisheries. It provides coastal communities with exclusive access privileges for fishing in defined areas and creates economic and social incentives to better manage their own fisheries, especially when paired with establishment of community savings and loans clubs. Established through local ordinances, managed-access has been implemented in 20 LGUs across the country and is recognized by the Government of the Philippines as a viable solution for small-scale fisheries management. The case study will detail the experience of delineating municipal waters and employing managed-access and how this is contributing to issues of poverty reduction and food security.

Session Date: Wednesday 12 September 2018

Presentation Title: The Upgrading of Traditional Marine Resource Management in Maluku and Papua: Process, Outputs and Outcomes

Presenter: Dedi Adhuri

Discourse and practical support to the revitalization of traditional marine/coastal management in Maluku and Papua have been voiced since 1980s. At the beginning, it was started as both a political resistance against the Indonesian New Order centralized regime and as a tool to empower traditional communities. Latter it become a movement geared toward coastal sustainability and increase communities' wellbeing. While most supports directed to revitalize the traditional management, some NGOs, including the Indonesian Locally Marine Manage Area (ILMMA), together with communities, worked beyond merely revitalization. They established an 'up-graded' community-based management by inserting modern knowledge and practices to the communities initiatives. This presentation will explain the process, outputs and outcomes of such initiative. In this regard, the paper will highlight the process toward the formalization of the traditional management practices in the form of village law, its impact to the marine/coastal resources, the harvest and the community's wellbeing

Session Date: Wednesday 12 September 2018

Presentation Title: Conservation and Sustainable Livelihood: A Case Study from Indonesian Manta Rays Hunters Community

Presenter: Amiroh Utami

In 2014, Indonesia Government announced full protection regulation for endangered marine megafauna such as Oceanic and Reef manta rays also whale shark. One of local communities that affected by its regulation is the largest manta rays hunting in the world, Lamakeran community, a small community in East Flores, who have been hunting manta rays, whale sharks, and odontoceti whales as their tradition for decades. Mobulids population declines 83% from 2002-2014 as increasing targeted mobulids fisheries since 1990s. Now with the nation-wide manta sanctuary, the community is at a critical crossroads, comply with the sanctuary and potentially loose their key income as high demand of manta rays gill-raker since early 2000s or sending the manta fishery into collapse while facing possible legal consequences. The establishment of fisheries laws with enforcement will only be effective when coupled with programs that address the livelihood needs of the affected community. By engaging village elders and 20 young ex-manta hunters, on early 2017 we develop fishermen cooperative that has 5 business units such as microfinance, ice producing, seaweed farming, minimarket and purse seine boat operation with purpose to help fishermen in increasing fish quality and escalate their income along with socializing endangered and protected marine animals, IUU fishing and the regulations that ruled them. It shows a surprising result that the annual targeted manta decreased 97% from 2015-2017 because of the law enforcement efforts from the local government and also alternative livelihood programs that help them to convert. The cooperative members increasing 320% in the last 12 months, 34% of them are ex-manta hunters and 28% of them are the wives that used to collected manta rays from their husband.