Tenure and Fishing Rights 2015
A Global Forum on Rights-based Approaches for Fisheries: A Report

In welcoming the participants of the Tenure and Fishing Rights 2015, Eng Chea San, Director-General of Fisheries Administration, Ministry of Agriculture, Forestry and Fisheries, Cambodia, hoped the Conference would allow different groups to share their experiences to arrive at a collective understanding of rights regimes to benefit fishing communities. Highlighting the case of Cambodia, he observed how collective action for mutual benefits was needed to empower fishing communities and to ensure fish for present and future consumption. The community fisheries approach of Cambodia – an approach that was based on upholding mutual responsibilities for sustainable use of fishery resources – was instrumental in eliminating private ownership and in replacing it with collective ownership, he said.

Referring to the Mekong river, Tonle Sap Lake and the coastal waters of Cambodia, Jean-Francois Caubain, Ambassador of the European Union in Cambodia, lauded "the most extensive and well-developed system of community fisheries in the world" but cautioned against dams and infrastructure development in the Mekong Basin, industrial and urban development and climate change that can threaten capture fisheries in such a sensitive and fragile ecosystem. To meet these challenges it was important, he said, to assist fishing communities to defend their basic rights and to provide them with the means to fulfil their responsibilities. The European Union (EU) is a strong advocate of the Code of Conduct for Responsible Fisheries, the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (Tenure Guidelines) and the Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) of the Food and Agriculture Organization of the United Nations (FAO), he added. The EU was keen to support the Government of Cambodia and other stakeholders in implementing these guidelines.

In his opening speech Mam Amnot, Secretary of State, Ministry of Agriculture, Forestry and Fisheries, Cambodia, hoped rights-based approach to fisheries, especially by promoting small-scale fisheries, would contribute to better nutrition, food security and income, reduce poverty and improve livelihoods of the poor and disadvantaged people, in particular.

Sin Run, Siem Reap Deputy Governor, and Johan H. Williams, Specialist Director, Fisheries and Aquaculture, Ministry of Trade, Industry and Fisheries, Norway, also spoke at the opening session.

Kate Bonzon, Senior Director, Oceans Programme, Environmental Defense Fund, United States, provided an overview of the types of user rights and their potential contributions to conservation of fishery resources, food security and poverty eradication, and development of fishing communities. She mentioned that secure tenure is important for human rights, social stability and economic growth. Tenure systems, according to the Tenure Guidelines, determine, she pointed out, who can use which resources, for how long, and under what conditions, based either on written policies and laws, or on unwritten customs and practices. There is a striking diversity of tenure rights in the fisheries sector, she said, ranging from some comprising a few participants to

those comprising thousands; some targeting sedentary, nearshore species to those targeting highly migratory species; and some comprising capital-intensive fishing craft, gear and techniques to those just hand gleaning, employing wind power for propulsion and using rudimentary gear. She mentioned four important distinctions to be considered: tenure rights systems focusing on single species or multiple species; those systems based on secure shares of fish or secure areas to fish; those for allocating rights to groups or individuals; those allowing transferability of rights on a permanent or short term basis, or not allowing any transfer at all. These distinctions highlight the flexibility of tenure rights systems. Tenure rights can be customized to meet the goals and needs of each situation. What was common, though, to all these forms of tenure rights, she said, was the notion of rights and responsibilities. Co-management often went hand in hand with tenure rights— an approach in which the government and the users shared in the responsibility and actions of governing the resource. A growing body of experience showed that co-management could be effective in managing resources. She sought clarity on goals, inclusion, and adaptation as three commitments for tenure-rights regimes to succeed. Security, durability, exclusivity, limited participation, accountability and transferability were the key design principles, she held, of a successful tenure-rights system. She concluded her presentation by observing that “tenure rights are the foundation for sustainable management”.

Kaing Khim, Deputy Director General, Fisheries Administration, Ministry of Agriculture, Forestry and Fisheries, Cambodia, shared Cambodia's experience with implementing a user-rights system in lake fisheries, highlighting its social, economic and environmental aspects. The Cambodian fisheries sector contributes 8 to 12 per cent of gross domestic product (GDP). Freshwater fisheries, in particular, are an important source of employment and food security. She explained how development partners like Oxfam, the Danish International Development Agency (DANIDA) and an FAO-supported project established community-based natural-resource management initiatives in 1998 and 1999. However, it was only in 2000 that a government policy was proclaimed whereby the individually owned fishing lots were abolished, taken over, and re-distributed to the small-scale fishers in the form of Community Fisheries. These reforms were introduced to address conflicts between small- and large-scale fishing gear, on the one hand, and to reduce overfishing pressure, on the other. The reforms were to ensure that the rural Cambodian communities enjoyed access to fish for food and livelihood. While a fishing lot area of about 5,412 sq km—nearly 57 per cent of the total— was released in late-2000 to local small-scale fishers, another 3,152 sq km—33 per cent of the total— was further released to local small-scale fishers in 2012. The remaining 10 per cent was kept for conservation purposes. As of now, there is a total of 516 Community Fisheries, she said. The fisheries laws were amended to introduce a legal framework for Community Fisheries, which are now led by Community Fisheries committees comprising local, elected representatives. Although the Community Fisheries areas are State property, the communities have tenure right to particular fishing grounds. The communities can not only organize fishing activities in accordance with law, but could also undertake aquaculture and fish processing, pursue alternative livelihoods and undertake fisheries management in these areas. They are to combat illegal fishing operations in collaboration with the fisheries authorities. The Community Fisheries reforms have, she said, have led to enhanced fish production and have elicited greater participation of people in resource management and have also helped them understand the importance of conservation initiatives.

Dedi S. Adhuri, Senior Researcher, Research Centre for Society and Culture, Indonesia Institute of Sciences, gave the example of a project to introduce an ecosystem approach to fisheries management through revitalizing the *awik-awik* traditional co-management regime in Jor Bay, East Lombok, Indonesia. This was to manage conflicts between fishing, cage culture and aquaculture, and to protect the mangrove, coral and seagrass habitats in an area of 10 sq km. with the involvement of two village communities. The project led to the elimination of destructive fishing practices, and a reduction in the number of conflicts within, and between, user groups in the Bay, he claimed.

Andrew Baio, University of Sierra Leone and Managing Director, Natural Resource Management Consortium, Sierra Leone, presented the current fisheries reforms, especially of community management associations of coastal fishing communities adopting co-management agreements in marine protected areas.

Patricia Jack-Jossien, Vessel Day Scheme (VDS) Manager, Parties to the Nauru Agreement (PNA), Majuro, Marshall Islands, spoke about the introduction of the purse seine VDS—an effort-control scheme introduced in 2007 to set overall limits on the number of days purse-seine fishing vessels could be licensed to fish in PNA waters. These limits are set, she said, based on

the scientific advice from the Western Central Pacific Fisheries Commission (WCPFC). The VDS replaced guaranteed access to PNA waters against access fee of purse-seiners from distant water fishing nations. In 2015, a total allowable effort (TAE) of nearly 45,000 days was set. Vessels participating in VDS—about 280 in number— have onboard observers and are tracked by satellite, she said. The value of a fishing day has shot up from US$1,100 in 2010 to US$10,000 in 2015. The VDS revenue from PNA purse-seine fishery—measured in value of PNA days—has increased over six-fold from US$60 mn in 2010 to US$365 mn in 2015, now accounting for 14 per cent of the value of the PNA exclusive economic zone (EEZ) catch. The VDS is the "most transformative agent in the fishery, not only as an excellent sustainability tool but also as an economic instrument", she observed. PNA accounts for 50 per cent of global skipjack catch. It has the world's largest skipjack fishery distributed across 14.3 mn sq km of EEZs. The Parties to Nauru Agreement are the Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands and Tuvalu.

Minerva Arce-Ibarra shared the experience of community territorial use rights introduced in 2007in the upper Gulf of California, Mexico, for the conservation of endemic endangered Gulf weakfish (*Cynoscion othonopterus*), Gulf porpoise (*Phocoena sinus*) and totoaba (*Totoaba macdonaldi*). A combination of fishing permits and catch quotas to benefit three local communities, including the native Cocopah People, was introduced in a designated area in the Gulf to protect reproductive fish aggregations and to regulate fishing pressure. The permits were valid for two years and were renewable, she said. Although heritable, the permits were not transferable. There were designated landing centres for fishing boats and fishers. The fishing permits were secure if there was no infringement of law. The Cocopah People, however, were not happy that their ancestral land was part of the nucleus zone of the protected area. In spite of regulated access, women and youth continue to fish due to lack of any alternative employment. The enforcement regime became weak with the downsizing of the federal fishery institutions in Mexico, including in terms of reduced budget and staff. In spite of the rights-based system, the population of endangered fish species continued to deteriorate, she observed. Local communities were also slow to adopt the rights-based system. With greater participation of local communities in fisheries management, by setting target and limit reference points for harvested fish stocks and by adopting an effective enforcement regime, in conjunction with providing alternative employment opportunities, the rights-based system can help protect endangered fish stocks, she concluded.

Sherry Pictou, Bear River First Nation, Canada, talked about the relationship between a property-rights approach and Indigenous-rights approach in the context of inland and marine capture fisheries in Nova Scotia, a part of Mi'kma'ki ancestral homelands, or Atlantic Canada. She examined the history of individual transferable quotas (ITQs) as well as the decision of the Supreme Court of Canada—known as the Marshall Decision—upholding a treaty right of the Mi'kmaq people to a livelihood fishery. There are 28 Mi'kma'ki Bands throughout Atlantic Canada and six Maliseet First Nation communities in New Brunswick. Two First Nation communities that have been trying to assert a treaty right to a livelihood fishery in Atlantic Canada are the Bear River First Nation and Paqtnkek First Nation, she said. The fishing grounds of the First Nations included inland and marine areas. The ITQs are the primary management approach in Atlantic Canada, as a result of which, handlining has disappeared, she noted. There

are fewer independent fishers left and more and more fisheries are concentrated in the hands of a few corporate hands. There are more discards and poor working conditions, especially on board scallop draggers.

The ITQs of Atlantic Canada have become a 'tragedy of privatization', she alleged, quoting James Tully, a Canadian philosopher. There were demonstrations against ITQs across Nova Scotia in 1996 especially by the fixed-gear fleet employing vessels less than 45 ft in length. The Mi'kmaq Fish and Wildlife Commission supported the fishers in a court challenge against the ITQs in 1998. She recalled the successful coalition of non-native inshore fishers and Mi'kmaq with environmental non-governmental organizations (NGOs) against industrial krill fishery in 1999. The British Columbia Northern Coast First Nations, together with the local fishermen's unions, also strongly opposed ITQs. These protests led to the introduction of community-based quotas and community-based fisheries management in Atlantic Canada, she said.

According to the Marshall Decision, even if the Mi'kmaq people could not accumulate wealth from fishing or fish for economic gain, they could produce a moderate livelihood for their families from fishing. The Fisheries and Oceans Canada (DFO), however, does not recognize the treaty right of Mi'kmaq people and there is still no mechanism for implementing their right to a livelihood fishery, she observed. The Bear River First Nation has been campaigning against privatized clam beaches, industrial salmon farms, and a mega quarry. Both Bear River First Nation and Paqtnkek First Nation are building alliances not only with local fish harvesters such as clammers and other independent fishers, but also with international learning circles on small-scale fisheries co-ordinated by the Bay of Fundy Marine Resource Centre, as well as the World Forum of Fish Harvesters & Fish Workers (WFF), the World Forum of Fisher Peoples (WFFP) and the International Collective in Support of Fishworkers (ICSF), especially to learn about community-based approaches in fisheries, she added.

The Mi'kmaq people are opposed to property rights for several reasons: firstly, in the property-rights approach, the marketplace is supreme and placed above Indigenous rights; secondly, in countries like Canada, property-rights regimes such as ITQs have undermined small-scale fisheries and livelihoods; thirdly, the property-rights approach runs counter to the SSF Guidelines and the Tenure Guidelines that are based on human-rights standards, including Indigenous rights under the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP); fourthly, property-rights regimes commodify treaty and other legal obligations, putting them on the market to be bought and sold, thus taking out the human ecology component; and fifthly, given their struggle to implement a livelihood fishery in light of a narrow mandate coming out of the Marshall Decision, Bear River First Nation and Paqtnkek conclude that *corporate law* and *property law* supersede their *human-rights law* and Canada's highest aboriginal and treaty rights. She referred to the non-implementation of the 1998 Recommendations of the Parliament of Canada Standing Senate Committee on Privatization and Quota Licensing in Canada's Fisheries. These recommendations are: to consider the long-term social and economic effects of individual quota licences, especially those that are transferable, on Canada's coastal communities, including aboriginal communities; and not to extend the individual quota regime until the needs of coastal communities, aboriginal and other, have been fully assessed. She also drew attention to the 2014 United Nations Report of the Special

Rapporteur on the Rights of Indigenous Peoples, Canada, which points out the issue of resolving Indigenous Treaty and Land Claims.

For Indigenous peoples and small-scale fishing communities, *rights-based* means something different than ITQs, she observed. An Indigenous rights-based fishery recognizes ancestral rights and the spiritual dimension of rights (*Netukulimk*). "We used any resources we needed and left the others for future use. We used what we needed and spared the rest. The geological and ecological relationship that developed formed a spiritual, genetic and biological relationship to these resources. We found and developed our place within the biosphere, and a humble place in the food chain that kept the balance for all within it – a relationship that brought together a deep understanding of our place in the web of life", she quoted Elder and Former Chief, Kerry Prosper. She concluded by stressing the need for implementing the SSF Guidelines from the perspective of small-scale fisheries, including the Indigenous peoples.

Kristján Skarphéðinsson, Permanent Secretary, Ministry of Industries and Innovation, Iceland, observed that even though the fishing industry is historically significant and economically still important, the Iceland economy has diversified and new sectors have evolved in recent decades. As far as export earnings are concerned, the tourism industry has edged out fisheries. There are a million tourists arriving in Iceland every year now. Aluminium export earnings are closely behind fisheries exports, he noted.

Fishing and fish processing have become integrated into the economy as never before, with many of the larger companies listed on the Icelandic Stock Exchange. He gave a brief account of the Icelandic fisheries-management system, how it came about, how it has evolved and the current political debates about its future. He also provided a biological, economic and social perspective of Icelandic fisheries.

After fishing with open boats since the 9th century, Iceland took up trawling in the early 20th century. Fisheries export earnings in 2013 stood at US$2.0 bn (ISK272 bn). Fisheries and fish processing contribute 10 per cent of Icelandic GDP. If service and technology sectors supporting fisheries are also taken into account, the sector would contribute 27 per cent of the GDP.

The fisheries in Iceland are now "sustainable, efficient and highly profitable", he observed. The fish stocks are in a healthy condition. The Icelandic fishing fleets, including smaller boats, have evolved efficiently to deal with harvesting their allocated quota shares, to process the catch and to provide better working conditions for the crew. Computerized vision technology is employed to process fish, which creates more value-added products from traditional raw materials.

Iceland gained exclusive rights to fish up to three nautical miles of its coastal waters in 1901; to four nautical miles in 1952; 12 nautical miles in 1958; 50 nautical miles in 1972 and, finally, up to 200 nautical miles in 1975. The Marine Research Institute issued a report on the status of the

cod stocks in 1975, which recommended a maximum of 500,000 tonnes of demersal catch. It sought protecting juvenile fish, ensuring maximum sustainable yield, especially through input controls such as limiting total fishing fleet effort, fixing number of days at sea, and diversifying effort to species other than cod.

The effort-control measures, however, did not work. Effort limits were not working and the cod stocks suffered a decline in 1979 and 1983. Fishers beefed up efficiency of their vessels to catch as much as they could within their allotted number of days. About 70 per cent of cod was caught in a matter of three months in 1983.

The biological and economic outcomes were poor, which led to the introduction of a quota-management system in 1984. There was a national debate on designing such a system, especially regarding whether quota shares should go to all Icelanders, or only to vessel owners, fish processors, coastal communities, or a combination of them.

The Parliament decided to allocate the total allowable catch (TAC) to those who had already invested own money in fishing vessels. Such vessels in operation during 1981, 1982 and 1983 were to be granted a share of total allowable catch (TAC) in 1984. The small vessel owners, however, rejected such a system as being “bureaucratic and unethical” and settled for a competitive-type of fishing under a TAC limit, allotted to them. There were many complaints against the quota system in 1984 including that it caused widespread unemployment.

In the original allocation, quotas were firmly tied to the vessels and made non-transferable. Soon transferability of quotas along with vessels was permitted in 1984 itself to save on operating costs such as fuel, thus to improve the economic efficiency of fishing units. Fishing quotas soon began to acquire a price by trading vessels with a quota allocation (trading quotas alone was illegal). Old and dilapidated vessels, he said, suddenly acquired a price disproportional to their true value. This situation led the Parliament to bring changes to the legislation permitting trading of quotas between vessels. Thus a vessel could lease quota or buy a permanent quota.

Soon a real quota market emerged where quotas for different fish species could be bought and sold. Problems such as “high grading” and “black landings” emerged as a result, that led to development of tighter controls. Data related to scientific TAC advice, government decision and actual landings between 1984 and 2013,show that these figures converge from 1991 onwards, indicating that scientific advice was being taken seriously and that the landing controls were working well.

One of the greatest achivements of the Icelandic fisheries management system, he said, was the undisputed support for the science-based decisions to granting fishing quotas. A set of agreed landing centres was established in 50 ports around the island to send landings data directly to the Directorate of Fisheries, with powerful deterrents, includng heavy fines, against misconduct. In addition, there are various technical protecton measuures, especially a system of temperory and

permanent closures of the Icelandic fishing grounds. There is also a general ban of trawling within 12 nautical miles from the shore.

As a result of the quota management system, there are fewer fishing vessels and fewer processing plants (because of mergers and acquisitions in the sector). There is also more automation in the sector. Fewer people are now working in the fisheries sector. The Icelandic workforce involved in fishing and fish processing has more than halved from 12 per cent in 1983 to 5.3 per cent in 2014. However, some new jobs are created in the information technology and engineering departments.

With fewer and more efficient vessels not having to race for fish, the total fuel consumption of fishing vessels has gone down from 244,000 tonnes in 1993 to 151,000 tonnes in 2013. Between these years, marine products export revenue has gone up from US$1.4 bn (ISK187 bn) to US$2.0 bn (ISK272 bn). While the cod catch almost halved from 460,000 tonnes in 1981 to 236,000 tonnes in 2013, its export value more than doubled from US$303 mn to US$720 mn in the same period.

There is better utilization of fish byproducts, he said. Some 50,000 tonnes of fish heads that used to be discarded or reduced to fishmeal are now being dried and exported as human food. The utilization rate of Icelandic cod now comes close to 95 per cent. The average earnings before interest, taxes, depreciation and amortization of Icelandic fisheries companies rose from 7 per cent during 1980-1984 to 15 per cent in 1984-1992 and further to 22 per cent between 1992-2012, despite the cod catches generally going down during this period. The Icelandic law states that no single company can hold more than 12 per cent share of the quota. Consistent with this, quota holdings have concentrated in the hands of bigger companies that are vertically integrated. The catch share of the 10 largest quota holders has progressively increased from 24 per cent in 1992 to 32 per cent in 1999, to 47 per cent in 2004 and further to 52 per cent in 2014.

The direct fisheries charges—income tax, social security fee, fishing fee and other fee— levied on fisheries companies have increased from US$37 mn (ISK5 bn) in 2004 to US$184 mn (ISK25 bn) in 2013, which is about 10 per cent of the value of marine products exports. The critics are of the view, he said, that the bigger companies have become very powerful and that they should be paying much more than 10 per cent of export value to the public coffers.

There are new legislation in the pipeline to clarify that the fishing rights are the property of the State; that fishing quotas will be in the form of time-bound contracts between the State and individual companies; and that the State will collect a fee for leasing these contracts. The Parliament has to decide upon time frames for the contracts— the time frames within which the State will either renew contracts or revoke them. Special community quotas—that already make up 5.3 per cent of the total quotas—also have to be agreed upon, he concluded.

In the discussion that followed these presenations, Kristján Skarphéðinsson clarified that fishers on board fishing vessels earn a good income in Iceland since their wages are linked to the value of fish catch. Sherry Pictou said ITQ fisheries and livelihood fishery cannot co-exist. Referring to the Marine Stewardship Council (MSC) certification and ecolabelling of Icelandic cod,

haddock and saithe fisheries, she said such ecolabels are affordable only to a few fishers who are rich.

Annie Jarrett, Chief Executive Officer, Northern Prawn Fishery Industry Private Limited (NPFI), Australia, talked about the experience with user rights in Australia's Northern Prawn Fishery, focusing on their social, economic and environmental aspects. The landed value of Northern prawn fishery in Australia's Far North, mainly comprising banana prawn and tiger prawn in an area of 770,000 sq km, is the most valuable prawn fishery of Australia (between US$50 to US$74 mn). The prawns are caught by 52 freezer trawlers, 20-24 m in length, employing twin, triple and quadruple otter trawl.

It is a limited-entry fishery regulated through input controls in the form of statutory fishing rights (SFRs) comprising boat SFRs (one SFR per boat) and gear SFRs (1 cm headrope = 1 gear SFR), where the management costs of US$2 mn are defrayed by the industry. She spoke about how an open-access fishery between 1965 and 1977 transformed into a limited-entry fishery after being through various stages of reforms. The initial effort control measures were not successful in reducing fishing effort and capacity or to check overfishing.

The reforms in the year 2000 led to the introduction of gear unit rights system and individual transferable effort units (ITEs), which were fully transferable and divisible. Input substitution/effort creep was monitored through annual surveys. The value of the gear unit in terms of headrope length was adjusted against changes in fishery productivity/effort creep. This facilitated the removal of 100 vessels between 2000 and 2007, she said.

The governance structure is robust, and based on a transparent, participatory and accountable legal framework, she added. At the regulatory level, there is a collaborative administrative structure involving the industry, science and NGOs. There is a co-management contract between the Australian Fisheries Management Authority (AFMA) and the NPFI, where the latter is responsible for data management, crew-member observer programme, advice on regulatory changes, etc.

It is an equal-opportunity fishery where many women are involved since the 1970s as skippers, cooks and deckhands. Women comprise 50 per cent of crew-member observer programmes, she said. There is also participation of Indigenous and non-Australians in these activities. The AFMA legislation is based on ecological sustainable development, the precautionary principle and ecosystem-based fishery management. The harvest strategies include target reference points, limit reference points and bycatch policies. There are programmes to improve safety, to protect fishers and fishworkers and to upskill these workers.

The social effects of the gear unit rights system and ITEs include: generating stable employment, long-term career paths, higher remuneration, and profit-sharing arrangements in the form of bonuses. Alternative career paths such as onshore fleet managers, mothership operators, scientific observers, fisheries managers, and marketing and recruitment officers have opened up.

Seventy per cent of fishing rights, however, are held by medium to large companies (companies owning five to 12 vessels) and the remaining 30 per cent are held by smaller operators owning

one to four vessels. Altogether, there are 19 owners. This is unlike the situation that prevailed in 2000 when large and small operators held equal share of fishing rights.

As far as the economic impacts of fishing rights are concerned, the number of fishing vessels has come down from 134 before the introduction of gear units in 1998-99 to 52 vessels in 2011-12. During the same period, the income per vessel has increased from US$860,000 to US$1.4 mn. The gross value of production, however, has come down from over US$170 mn in 2000-01 to US$74 mn in 2010-11.

The environmental benefits include: improvement in stock status of banana prawn and tiger prawn, a smaller environmental footprint, which is only about 8 per cent of the area fished and a 50 per cent reduction on bycatch of turtles, rays and sharks. A rights-based system can be highly successful or totally disastrous, she observed. One of the key lessons in developing and implementing user rights is full stakeholder engagement. A lack of buy-in from stakeholders will result in the abuse and failure of the rights system, she warned. “We have to get the ‘rights’ right”.

Ragnar Arnason, Department of Economics, and Chair, Institute of Economic Studies, University of Iceland, said according to the “common-property theorem”, valuable resources held in common tend to be overexploited and wasted. The theorem holds true for all resources, places and times, he said, except in situations where the “common-property group” is very small or where such a group is able to establish a co-ordinated use, or management regime. The common-property problems in fisheries are: excessive fishing fleet and effort, overexploited fish stocks, poor profitability, low personal incomes, little or no contribution to GDP, a threat to biological sustainability, as well as economic and social sustainability, he noted.

Under the “individual property theorem”, valuable resources held by single agents tend to be well used and preserved, he said. This theorem also holds true for all resources, places and times. Its validity is pretty obvious: individuals maximize their benefits, which is formally proved in economic theory. Although individual property promotes economic efficiency—it maximizes income and economic growth—and empowers rights holders, it does not necessarily promote equity and fairness, he noted, nor does it preserve traditional social structures. On the contrary, it often leads to undermining such social structures.

At the empirical level, most fisheries in the world have been organized as common-property fisheries. This has led to overexploitation, as predicted by theory. At current levels of fishing effort (2004 figures) there is a revenue loss of US$5 bn, he said. Although global fisheries are still mostly organized as common-property regimes, rights-based fisheries are becoming more common. Key property rights in fisheries range from: sole ownership (rarely used); territorial use rights or TURFs (mainly for sedentary species); individual quotas such as IQs or ITQs (very common); to community rights (fairly common). The ITQs are the “most widely applied rights-based fisheries management system in the world”, he said. The ITQ regime has been adopted by at least 22 major fishing nations outside the tropical belt both in the Northern and Southern Hemisphere, including the Organization for Economic Co-operation and Development (OECD) countries, Russia and developing countries like South Africa, Namibia and Peru. Close to 25 per cent of global catches are now taken under ITQs. Looking at the outcomes of ITQs, especially

the general pattern emerging from around the world, these are economically very successful (by reducing fishing effort, by increasingly unit price of landings, by reducing fishing capital, and by enhancing value of quotas) and biologically moderately successful (by leading to recovery of biomass, albeit slowly; by reducing discards and by enhancing a sense of resource stewardship among fishers).

As far as the social outcome is concerned, ITQs have altered the structure of fishing industry and fishing communities, Arnason observed. More efficient fishing operations and techniques are promoted. ITQs have tended to consolidate fishing operations. As a result, there are fewer fishing vessels and fishers. Some people get rich and a more capitalistic culture is promoted. Although property-rights regimes, in principle, solve the main problems in fisheries, there are difficulties, in practice. It is difficult to define and enforce property rights. It is prohibitively costly to enforce them. ITQs are also infeasible from a socio-political perspective. These difficulties apply, in particular, to artisanal fisheries in developing countries, especially in Africa and Asia that contribute 50 per cent of global fish catches, he said. For these reasons, attention has been drawn to community fishing rights. However, it is important to address the common-property problem within the community such as in decisionmaking in groups and in politics, and disparage member interests through improving the quality of community rights and decision-making set-ups. The design principles should include these tenets: community rights to be as high quality as possible; the community to be able to restrict entry; the community to be inclusive, especially by including all fishers in an area; the community to have as homogenous a membership as possible; and the community to be endowed with efficient decision-making structures of governance. Examining the case studies presented during the Conference, while bioeconomic outcomes are good if individual rights are robust and communal rights are weak, social outcomes are good if communal rights are robust and individual rights are weak, he observed.

Seth Macinko, Associate Professor, Department of Marine Affairs, University of Rhode Island, US, spoke about his perspective on rights-based approaches as a management tool. It is important to clarify what is meant by rights-based approaches, and in what sense are rights involved and what kind of rights are being discussed, he said. How does one say that a particular programme is based on rights? Is the term “rights” referring to “human rights”, “indigenous rights”, “user rights”, “tenure rights”, he queried.

He referred to the 2010 Amendment 16 of the Northeast Multispecies Fisheries Management Plan that shifted the New England groundfish fishery from a days-at-sea system for regulating fishing effort, to a quota management system for establishing catch limits. According to those pushing for privatization, ITQs are seen as “one of the greatest institutional changes of our times: the enclosure and privatization of the common resources of the ocean”. In another example, he showed how the Gulf of Mexico Fishery Management Council in the US stated that it was taking a fishery that belonged jointly to the people of the nation and was transferring it to private ownership forever.

Macinko said that the whole argument for privatization of fisheries was conceptually flawed since fisheries management was different from ownership of fisheries resources. Rules and rights are not the same thing, he said. Rights and incentives are also not the same thing. An overall catch limit could be divided into individual assignments that each vessel can fish where and

when they want to, subject to other rules. The prearranged assignment is a tool; however, to insist that the tool must be private property and only "works" if it is private property, is ideology, he said. Individual fishing quotas should be seen only as catch-share-based fishing and not as property rights-based fishing. The menu of available policy options could be larger if the tool—catch shares—can be liberated from the ideology of private property. "Policy options are being forced off the table by ideological dogmatism", he argued.

The consequences—both intended and unintended—of the privatization approach, however, should be addressed, he said, especially issues such as small vessels getting replaced by larger, more efficient and expensive vessels, and concentration of quotas with a small number of highly specialized vessels. He said we have seen this in places like Denmark where the officials responsible for the design of the privatization programme openly admit that this result is the intended result. He suggested that there are very few unintended consequences, only intended consequences.

The privatization approach to using assigned catches has taken fishery resources away from the public and small fishers and given them to large quota holders who do not pay for the quotas allotted to them. Proponents of the privatization approach are now opening talk about inviting Wall Street in and he feared that the "wet enclosure movement" will eventually displace members of coastal communities from fishing. As practised, the privatization approach is inconsistent with the Tenure Guidelines, the SSF Guidelines, and human rights and indigenous rights, he said.

Under either the public option or the privatization option, the race for fish can be substantially reduced if incentives can be shifted from maximizing catch to maximizing profit, and finer control can be achieved over attaining the overall TAC. Market fundamentalism precludes serious conversations about goals. Societies should debate, he said, whether they would like public assets to remain under public ownership or if they should be privatized. There should be public policy discussion in regard to how to employ pre-assigned catch while meeting the trust obligations of public ownership and who should be the lessors (for example, the parties doing the leasing) in a catch-shares system.

In the panel discussion that followed on experiences with rights-based approaches in fisheries, Johan Williams spoke about fishing permits in Norway being issued to registered fishermen and how a surviving spouse of such a fisherman has no right to his fishing permit if he ever loses his life at sea or on land. Peter Degen, International Technical Adviser, Mekong River Commission (MRC) Fisheries Programme, Phnom Penh, Cambodia, talked about "invisible fishers", referring to inland fishers in the informal economy of Cambodia, who are marginalized from political processes. The local knowledge of inland fishers does not find its way into formal decision-making processes, he observed. Christiana Louwa of the El Molo Forum, Kenya, said Kenyan fisheries law does not protect the tribal people. Increasingly, their fishing opportunities are being taken away by "outsiders" The rights of indigenous people under the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) are also not enjoyed by the tribal people. She wanted the constitution of Kenya to protect the rights of Kenyan indigenous peoples.

Arthur Bogason, WFF, speaking as an opponent of ITQs, said catch shares are the same as ITQs. One cannot lightly discuss transferability issues when livelihoods of people are involved. Under ITQ or catch-share regimes, communities are left without fishing rights to their traditional fishing grounds. No one has estimated the depreciation costs of the assets such as houses and fishing equipment that the communities incurred after they lost access to their fishery and after they were forced out of their villages to seek work elsewhere.

Naseegh Jaffer, Director, Masifundise (South Africa) and Co-ordinator, WFFP, said in South Africa there is skewed ownership of fishing rights and processing benefits. Towards addressing issues related to overfishing, mismanagement and corruption, South Africa adopted the Marine Living Resources Act, 1997 (MLRA). Subsequently, a long term fishing policy (LTFP) was adopted in 2005, which allocated fishing rights under an individual quota system that mainly benefited large commercial fishing industry and fish-processing companies.

The LTFP led to a series of strategic errors, he said. It failed to recognize traditional and customary fishing communities, thereby making them illegal. Only marine biological information informed legislation and policy. Social sciences played no role. There was insufficient institutional capacity put in place to manage the fishery. There were no serious consultations with fishing communities, either. As a result of these errors, small-scale fishers were criminalized. There was increased poverty and food insecurity, breakdown of social cohesion, especially in poor rural communities, and inability of fishers to meet their livelihood needs, he alleged. The fishery was badly affected by mismanagement and politicking. As a result, the fishery-management system lost its legitimacy.

Fishing communities started mobilizing for a new form of “access” rights, based on their human needs. Intensive action concurrent with the development of the SSF Guidelines decried “ITQs”, “private rights”, “property rights”, “shares” and “user rights” in favour of a human-rights-based approach to allocate fishing rights to fishing communities. A new fishing policy for the small-scale subsector was adopted in 2012 and the MLRA was amended to implement this policy.

The key principles adopted were: adopting a holistic approach that recognizes the interdependence of social, cultural, economic and ecological needs; recognition of customary and traditional practices as well as communal rights under shared governance and management responsibilities; promotion of local and traditional knowledge systems; encouragement of value-chain benefits to fishing communities; promotion of equity in all fishing practices; support for gender and (dis)ability equity and youth development; and acknowledgment of intra-governmental responsibility to address broader social needs in fishing communities alongside this policy.

ITQs and similar rights-based practices do not conform to universally accepted human-rights standards and are not appropriate for allocating fishing rights or to manage such rights of fishing communities, he held. The key to shaping policy and legislation in relation to fisheries management is meaningful participation of fishing communities. A plurality of allocation and management approaches is needed in order to sustain a fishery. Equity and subsidiarity must be the key underlying principles when allocating fishing rights, he said.

Sidibe Aboubacar of the Inter-African Bureau for Animal Resources (IBAR) of the African Union (AU), said the user rights-based approach is new to Africa. There is a prevailing fear among marginalized small-scale fishing communities in Africa that the fisheries sector would be privatized and the powerful would be allocated exclusive rights over their common-property resources. Rights allocation could cause controversy if the criteria for allocation are not clearly defined and accepted by stakeholders. Fishing rights should be combined with management rights. Rights to manage a fishery in a collaborative manner should be vested with a well-defined membership-based structure such as a co-operative, especially when it comes to the allocation of fishing rights, he observed.

Nadine Nembhard, Co-ordinator, Caribbean Network of Fisherfolk Organization (CNFO), supported a human-rights-based approach in fisheries and observed that equity is the most important aspect of access rights. She gave the example from Belize where traditional fishers are given access to fish in a marine protected area.

Erick Ross Salazar, Manager, MarViva Sciences, San Jose, Costa Rica, talked about overexploitation of *corvina* (croaker) and the interest shown by local fishers in having a quota management system for this fishery. He also mentioned market-based initiatives for fishers to run their organizations.

There were several reports from different working groups. The Gender and Fishing Rights working group observed that in open-access fisheries, social and cultural factors limited women's access to fisheries. Women faced several hindrances such as poor access to capital; violence, sexual assault and theft; inability to travel without being accompanied; childcare and household work; and poor heritability of property and tenure. Fisheries tend to move from common property to "all-male" property. It was further observed that for women, tenure and individual rights in a fishery are secondary to broader social and political rights. Empowering women is necessary so that they can participate more equally in an economy and a fishery. It was important to look at how women can fully benefit from access rights to fishery resources, at all stages of the value chain. It was also important to determine what aspects of traditional tenure rights, or of formalization of such rights, need to be scrutinized to avoid institutionalizing inequities in the current system. It was not only important to talk about granting rights to women but also to sustain them. Women should be empowered to exercise their rights. The group proposed that a conference focusing on issues related to empowerment and capacity building of women in the fisheries value chain be organized in future.

In the final session, commenting on the forum highlights from various perspectives, KwangSuk Oh, Director, International Co-operation Division, Ministry of Oceans and Fisheries, Republic of Korea, observed that a key message coming from the forum was the need for making rights-based approaches coherent with human rights. In this context, he highlighted the importance of good governance. It was necessary to have binding legislation to protect women, equity and human rights, he said. National and local governments have a role in good governance as well. Helga Josupeit of the Fisheries and Aquaculture Department of FAO highlighted the need for discussing specific rights of women in all stages of the value chain as a key point emerging from the forum.

Rebecca Metzner, Branch Chief, Policy, Economics and Institutions (FIPI), Fisheries and Aquaculture Department, FAO, said there were 139 participants attending the conference from 38 countries from across Africa, Asia, Latin America, the Caribbean, Europe and North America. The discussions were holistic, covering a full package of considerations including a human-rights approach. The forum benefited from new tools such as the Right to Food Guidelines, Tenure Guidelines and the SSF Guidelines, which was not the case when similar conferences were organized in the past. There was a triangulation of food security, livelihood and wealth. The forum examined equity and efficiency issues, and discussed which takes priority, when, where and how, she said. It looked at imbalances of power, and the varying degrees of rule of law and enforceability. The meeting recognized issues such as heterogeneity: different types of people, jobs, countries, gender, etc. It examined different categories of fishers and fishing communities, including both scale and scope. Looking forward, she highlighted the need for capacity building for "on-the-ground action", especially awareness raising of fishers, fishery managers, fishing communities and politicians and to set a time frame for transition to rights-based fisheries, employing adaptive management. This dialogue should continue, she said, to seek coherence at various levels.