Indian fisheries sector has emerged as an important driver of food production providing nutritional security, besides livelihood support and gainful employment to more than 14.5 million people. The current paper discusses aquaculture in the context of fish ecosystem with regard to freshwater fish cultivation in tanks, ponds and similar water bodies existing in rural India. The issues discussed here are based on the author’s hands-on experience and insights while working on a livelihoods project in Lakhanpur Block of Jharsuguda District in Odisha supported by Corporate Social Responsibility (CSR) programme of Odisha Power Generation Corporation (OPGC) Ltd. The paper augues that in the context of fishing in rural/village areas, a vast scope is available for safeguarding fishers’ fundamental interests like steady basic income, food security and nutrition through promotion of fishing projects focusing on sustainable market-linked business models by bringing people together under a strong collective like a Producer Company. The Producer Company (PC) business model has been promoted to encourage the concept of collectivity in conducting business so that marginal and small primary producers can come together to form a larger group to command competitive advantage in the market and sell their products at a price that is profitable which is not possible for individual small village based fishers to achieve. This is where they regularly lose the incremental part of income every day and end up earning less throughout their productive life cycle. Multi-National Corporations (MNCs) operating along this value chain would be willing to form long-term partnerships with PCs in order to leverage the huge untapped business generation potential available at the BOP (village and local levels). In other words, economies of scale can be unlocked and livelihoods of fishermen can be improved significantly every month. Producer Companies offer greater credibility in the market than unregistered producers’ organizations. Hence, it would be a win-win proposition for MNCs to pitch in with required support mechanisms and generate sustainable spaces for conducting ethical businesses.

INTRODUCTION

Even as growth in agriculture sector remains a challenge due to fluctuating growth in sectors like crop, livestock and forestry from 2014-15 to 2017-18, fisheries sector has grown rapidly from 4.9 per cent in 2012-13 to 11.9 per cent in 2017-18. Fish and fish product exports
emerged as the largest group in agricultural exports and in value terms accounted for Rs. 47,620 crore in 2018-19 (Annual Report, GoI, 2017-18).

A Farmer Producer Organisation (FPO) is a legal entity formed by primary producers, viz. farmers, milk producers, fishermen, etc. Members are usually small farmers who are empowered by FPOs to trade in agricultural platforms. It is an organization of the producers, by the producers and for the producers. It is time to recognize the contributions of producer organizations and enhance their capacities to provide a much wider range of services to producers (Chander, 2013). PCs are a new form of FPO registered under the Companies Act, 2013, and enjoy much better credibility in the business context.

"Fisheries is a fast-growing sector in India, which provides nutrition and food security to a large population of the country besides providing income and employment to more than 14.5 million people," observed the Economic Survey of 2019-20 tabled by the Finance Minister, Government of India, in July 2019. India was the second largest fish producer in the world with a total production of 13.7 million metric tonnes in 2018-19 of which 65 per cent was from inland sector. Almost 50 per cent of inland fish production is from culture fisheries, which constitutes 6.5 per cent of global fish production. The sector has been showing a steady growth in the total gross value added and accounts for 5.23 per cent share of agricultural GDP. Indian fisheries sector has emerged as an important driver of food production providing nutritional security, besides livelihood support and gainful employment to more than 14.5 million people. In this backdrop, the current paper discusses aquaculture in the context of fish ecosystem with regard to freshwater fish cultivation in tanks, ponds and similar water bodies existing in rural India.

The issues discussed here are both national as well as local. The general issues discuss challenges that exist in the sector and how can they be overcome with specific reference to preserving and leveraging the business potential of local fishing ecosystems to protect the best interest of poor fishermen operating at the Bottom of the Pyramid (BOP). Discussion on protection, preservation and promotion of local fishing ecosystems draw heavily from the author’s hands-on experience and insights while working on a livelihoods project in Jharsuguda district of Odisha supported by Corporate Social Responsibility (CSR) programme of Odisha Power Generation Corporation (OPGC) Ltd., a leading State PSU of Odisha that generates power from coal.

The model of implementation of the livelihoods project is community based and led by a Producer Company [pursuant to sub-section (2) of section 7 of the Companies Act, 2013 and rule 8 the Companies (Incorporation) Rules, 2014] which was formed by local fishers, women and farmers to generate steady income by pursuing sustainable micro and small (proprietorship/individual and group based) business models that are locally relevant and have potential demand in the local markets. The paper argues that in the context of fishing in rural/ village areas, a vast scope is available for safeguarding fishers’ fundamental interests like steady basic income, food security and nutrition through promotion of fishing projects
focusing on sustainable market-linked business models by bringing people together under a strong collective like a Producer Company. The Producer Company (PC) business model has been promoted to encourage the concept of collectivity in conducting business so that marginal and small primary producers can come together to form a larger group to command competitive advantage in the market and sell their products at a price that is profitable which is not possible for individual small village based fishers to achieve. This is where they regularly lose the incremental part of income every day and end up earning less throughout their productive life cycle. In other words, economies of scale can be unlocked and livelihood of fishermen can be improved significantly every month. Producer Companies offer greater credibility in the market than unregistered producers’ organizations.

Because PCs are a better-fit to foster business through long-term and mutually beneficial partnerships, MNCs operating along this value chain would be willing to form long-term partnerships with PCs of fishers in order to leverage the huge untapped business generation potential available at the BOP (village and local levels) and build an inclusive business environment which would bring sustainability into the local fishing ecosystems and their own businesses along the entire value chain.

WHY VILLAGE BASED ECOSYSTEMS ARE CONSIDERED MORE SUSTAINABLE AND EQUITABLE?

Brackish water aquaculture is over dependant on lease-based fish farming. This is mainly exploitative in nature with an aim to generate maximum income during the lease period. This activity is usually in the control of fish mafia who bring in huge investments and organised business networks.

Rivers in India are facing multiple problems of severe pollution, over extraction, encroachment, dams and barrages which cut off the connectivity of the river with its associated ecosystems, climate change, deforestation in catchment areas, etc. Increasing number of studies are highlighting that hydrological modification, absence of water in rivers, obstacle to migration, changes in salinity, changes in sediment, loss of riparian areas and floodplains brought about by dams are perhaps the most important reasons behind the progressive dismal scenario of riverine fisheries (Dandekar, 2012).

According to Central Inland Fisheries Research Institute (CIFRI), “severe and drastic changes in the entire hydrological cycle of the river by dams and water abstractions have affected recruitment of most species, especially large carps, which like flowing water. Larger dams have been a major cause of degradation of aquatic environment and disruption of livelihoods of communities dependent upon the fishery along the rivers.”

In India, natural flow of all major rivers has been regulated for fulfilling water demand of agriculture and power sectors, without giving any attention to its impact on fisheries sector. As a result, rivers have lost their character and fisheries have suffered huge losses (Pathak and Tyagi, 2010).
Rivers are no more dependable for fishing as they stand degraded due to discharge of industrial waste and illegal sand mining. Moreover, there is rampant overfishing in rivers by rich contractors because of which the poor fishers are getting edged out. In this domain as well, leaseholders rule the roost and catch as much as possible by employing larger number of boats and big nets (called mahajaal locally) (Down To Earth, 2015). In addition, rivers being interstate in nature (for the most part), states are not inclined to fund anything related to riverine fisheries (Narayanan, 2016). Reservoir based fishing is also out of reach of village based poor fishers simply because they do not have the resources and capability to manage all necessary dimensions of a bigger business. In this case as well, quantum of catch has become severely uncertain in recent years.

Small-scale fisheries play a critical role in the food security of producers and their families, but also provide for other consumers. Inland fish is traded far afield from local ‘inland’ markets, and a substantial part of the catch may be consumed by nearby urban dwellers. Small-scale fisheries also play a role as a ‘safety-net’ in that fishing can provide alternative or additional sources of income, employment and food for the poor and near-poor households whose livelihoods have been temporarily reduced or affected by unexpected shocks or in periods of individual or collective economic crisis (Welcomme et al., 2010).

There is a wide range of access regimes and fishing right systems in the fisheries domain that one finds in villages and smaller habitations. In most cases they remain public resources but responsibilities for management are increasingly being devolved to private individuals or groups/ local communities. These choices affect the people at the bottom of the pyramid in myriad ways. Traditionally, fishery has been associated with poor, illiterate and impoverished population, who belong to the weaker sections of the society. Fishery significantly contributes to the livelihoods of the marginalized sections of population and to the nutritional security of millions.

However, village based populations do not have the capacity to invest more and run organised businesses ventures. They do not have the resources, skills and support system to run a business and ensure profitability in order to make it sustainable. Hence, they need enabling policy support and sustained hand-holding in a number of areas so that they become familiar with the fishing business value chain and are able to navigate it profitably over a period of time. A welfare oriented approach cannot make small and marginal fishers self-reliant and earn a constant stream of income in order to push them permanently out of poverty. They need to be consistently and meaningfully coached to manage fishing as a business/ entrepreneurial venture and make it sustainable. This has been the early experience of OPGC’s Sustainable Livelihoods Project that focuses on improvement of livelihoods options of rural fishers, women and farmers in six Gram Panchayats of Lahanpur Block in Jharsuguda District of Odisha.

Poor village based fishermen don’t usually go for organized fish farming. Because of their poor investment capacity and risks in protection of fishing areas and marketing, the
fisher communities allow the entry of contractors to manage the pond/ tanks and undertake fish farming. Although there is a huge demand for fish in domestic market, the fisher communities get very low price for their harvest because of poor post-harvesting and processing facilities. They don’t have any control over procurement, storage, transportation and negotiations for profitable sell.

Some of issues which need further debate are the coverage of insurance for inland fishery and welfare of fisher communities and treating inland fishery at par with agriculture. Still, a large number of fisher communities are out of the safety nets and welfare measures of the government. Though a farmer in agriculture gets lot of concessions and subsidies, the fish farmer does not usually get it. However, their real improvement would come only when future facilities, if any, need to be in a mode that would treat fishing as an organised business of viable collectives of fishermen.

In this situation, the Bottom of the Pyramid (BOP) concept and the approach associated with it assume great significance especially when a number of MNCs are entering the food and food processing sectors and they can play an important role in uplift of the conditions of rural poor fishers through backward integration and creating a multi-focal support system to bring about sustainable business enterprises while intentionally creating a futuristic balance between social goals and profit generating objectives.

It is worthwhile to mention here that the term “Bottom of the Pyramid” was first used by the President of U.S.A. Franklin D. Roosevelt on 7 April, 1932 in a Radio address, *The Forgotten Man* where he said “These unhappy times call for the building of plans that rest upon the forgotten, the unorganized but the indispensable units of economic power...that build from the bottom up and not from the top down, that put their faith once more in the forgotten man at the bottom of the economic pyramid.” After a long span of 70 years, i.e. in year 2002, C.K. Prahalad and Stuart L. Hart defined the people living on less than $ 2 per day per person as BOP. The seminal works of Prahalad (2004) and Hart (2007) in their books ‘The Fortune at the Bottom of the Pyramid’ and ‘Capitalism at the Crossroads’ respectively have further popularized the concept among the academicians, corporate decision makers and policy planners. Prahalad (2004) proposed that BOP can be developed by the multinational organizations with the support of the government and of the NGOs with the intention of development through inclusive capitalism. He further put forward the view that the poor are value conscious consumers and should be provided with value creating products and services that are utilitarian in nature (Bharti et al., 2014).

In this paper, the original concepts propagated by Prahalad and Hart have been modified while mixing them with other concepts (such as social enterprise, capability, social capital, etc. which are introduced below as a part of the overall narrative) in order to develop a more suitable concept that can be developed to create differences in strategies and lives where they matter the most.
CONTEXTUAL SIGNIFICANCE OF THE BOP APPROACH

In his seminal works on poverty, Amartya Sen [Sen, 1983; 1985] argued that the economic well-being of the poor was best understood through their capabilities rather than through more traditional economic concepts, such as choice and desire fulfilment. This led to the ‘capabilities framework’ for the evaluation of individual well-being, an approach that departed from traditional welfare approaches typically equating well-being with either opulence or utility (Nussbaum, 1988; Sen, 1999; Robeyns, 2003). As the poor acquire and develop more capabilities, they may be able to take advantage of economic and social opportunities. However, capability building and diffusion in less privileged contexts is no easy task; the poor are often isolated from the resources required to do so and there is a lack of collective action often necessary to achieve development goals (Evans, 2002; Krahn et al., 2009). To this end, sociologists, such as Putnam (1993), development scholars such as Woolcock and Narayan (2000), and management scholars such as Nahapiet and Ghoshal (1998) have argued that social capital is a necessary ingredient for community development and may provide the necessary bridge between the poor and the resources available through external groups or institutions (Ansari et al., 2012).

The importance of social capital for poverty alleviation has been established by anthropologists such as Scott (1976), who demonstrated how peasant communities survive on norms of collectivity which spring from social capital. Community resources are effectively allocated as children, the elderly and the ill are collectively cared for and gifts and loans of food, land, and livestock are distributed among the needy. This culture of reciprocity rooted in social capital ensures collective insurance and creates a social safety net for community members. While social capital is particularly important for the day-to-day survival of a poor community (Narayan, 1995; Moser, 1996), it can also help address challenges faced by the community over time. For example, strong community relationships can help resolve future disputes since established norms of trust and respect allow for better communication and coordination within a group (Varshney, 2000). Additionally, social cohesion helps communities collectively take advantage of new opportunities by encouraging collaborations based on collectivity and reciprocity.

This is where the Producer Company (PC) fits the bill by being an energetic platform of capacity building as well as social capital. The PC being a dynamic economic and commercial entity both legally and structurally, is the appropriate mechanism for breaking open the doors of entrepreneurship and access to markets while having the capacity to operate at scale. This is a typical business organisation which is presently referred to as a ‘social enterprise’ too. As a social enterprise, the PC is designed as a commercial and market-based firm that can operate locally to improve human well-being rather than to maximize profits, usually focusing on innovative solutions for people living in poverty. The PC primarily pursues social objectives through entrepreneurial approaches and business principles (Martin and Osberg, 2007).
One of the basic functions of the PC in the present context is to provide collective and large group based market access to small and fragmented fishers and help them become self-sufficient by creating increased business volume, increasing income and generating a decent surplus. Since the fishers at the village level come from low income populations with entrepreneurial skills who lack the required resources and capacity to supply enough fish individually in order to capture the premium monetary value of the existing market demand, the PC model offers great potential to ensure enhanced income. At the individual level the fishers also do not have access to a market large enough to sell and earn decent profit from their produce. In order to bring in the required changes in local business ecosystem, a PC has been set up through OPGC’s Sustainable Livelihoods Project to act as a collective platform to bridge the gap between existing market need and efficient supply, to provide capital, training, capacity and governance and to bolster the value, efficiency and volume of the existing supply chain.
The PC set up with the help of OPGC’s CSR intervention has a plan to roll out retail and distribution outlets in local markets to capture incremental value generated from increase in the local fishers’ collective productivity and thereby creating greater possibilities for enhanced incomes, enabling them to break out of the viciously repetitive cycle of poverty and collectively become a robust and self-sustaining entrepreneurial venture. Exhibit-1 captures the core approach behind setting up the PC business model to help poor fishers permanently come out of the grip of poverty.

TOWARDS AN INCLUSIVE BOP APPROACH IN THE VILLAGE BASED FISHING ECOSYSTEMS

Since many MNCs are often perceived to be primarily focusing on profits at the expense of ignoring social challenges in the countries of their operation, they have come under considerable scrutiny and pressure to pursue a more inclusive, conscientious and responsible type of capitalism (Korten, 2001; Margolis and Walsh, 2003). The focus of conducting responsible business has been gradually but consistently gravitating towards how big businesses can be part of the solution to social problems like reducing poverty, creating capability, providing resources and providing access to bigger markets while focusing on generating profit for all the actors along the value chain.

In the rural fishery sector context, the clarion call for major MNCs either already operating in India or planning to enter the Indian market should be focused on asking them to bring inclusiveness in their commercial business principles to the fishers operating at the BOP, i.e. villages and hamlets and scale-up as well as leverage the huge under-explored market functioning at the lowest level. Because the MNCs have the capabilities and reach to easily access various institutions present in the market and resources required for building capacity among village-based fishers and generating economic growth through a series of affordable innovations, striking a partnership with them would generate immense value for all stakeholders in the business.

Another core argument of the BOP approach has been that MNCs can earn more profits by tapping into the vast resources lying underutilised such as large number of village fishers, ponds and tanks. The poor fishers are ‘underserved’ due to various resource, skill and market related challenges and end up earning very low throughout the productive phase of their life cycle. The resource-rich MNCs can mobilize this underserved and under-utilized power by focusing on capacity building, building fishers’ collective organisational strength, facilitating access to niche markets, and guiding them to increase yield which would ultimately lead to availability of a far greater amount of fish when they learn to operate at scale. The argument therefore, invokes a ‘win–win’ scenario: profits for business enterprises that successfully serve this largely ignored market segment, while the impoverished benefit from resources and services that are specially designed for their needs (Prahalad, 2004). Exhibit-2 explains how the partnership between MNCs operating in the macro ecosystem can help build capacity of local poor fishers and drive growth for all the stakeholders in a wider business framework.
Fisheries in rainfed areas have immense potential. Small reservoirs, tanks, water harvesting ponds created as a part of watershed development under Mahatma Gandhi National Rural Employment Guarantee Scheme that dot the landscapes of rainfed areas have great potential for fisheries development. An estimated 2.3 million hectares of water spread area consisting of only tanks and ponds exist with tremendous controlled and planned fishery potential across the country. In almost all the states property rights over water bodies is provided to fishing cooperatives, except in Jharkhand where smaller water bodies are given on lease to individuals and larger water bodies are given only to cooperatives. These cooperatives are expected to facilitate the leasing of water bodies, providing credit facilities and inputs like seed and fish feed to the members. However, the proper functioning of these cooperatives is fiercely debated. Many of them are affiliated to local party politics. They lack technical knowledge, infrastructure and financial resources to undertake fishery as a viable enterprise (Mishra, 2012).

Varying water spread area, pronounced seasonality of filling, high dependence on rainfall, conflicting use with irrigation and common pool regime of property rights are some of the relevant distinct characteristics of these water bodies making fish production a
complex endeavour. There is a large gap in the potential and actual yields in these rainfed water bodies and there is scope for enhancing the fish production by about 3 to 5 times considering the present low productivity levels. Access to water bodies and their management for fishery development have been identified as major challenges in promotion of fishery development in villages. Although in many states in order to have secured access over water bodies by the fisher communities lease period has been mentioned as 5 years, in practice it varies widely. In many cases it has been found to be for one to three years which is inadequate to start and sustain a fish business by entering its value chain.

Large water bodies such as reservoirs and others are mostly owned and managed by the Fishery Departments in all the states and the smaller water bodies are usually being handed over to the Gram Panchayats. Gram Panchayat has been given power to lease ponds and tanks at their disposal and the policies of leasing by the Gram Panchayats do vary from state to state. All the water bodies owned by the Fishery Department across states are being leased out to the cooperatives formed and promoted by the Department. In case of large water bodies, the Governments do invest for infrastructure development and also for fish production enhancement but for the smaller water bodies especially leased out by the Gram Panchayats hardly any attention is being given by the Fishery Department to promote matters related to fishing as a professionally run business. The people working in this department also do not have the necessary capacity to initiate, establish and sustain fishing as a core business activity in the best interest of rural poor so that they get an assured income out of the same.

In almost all the states, water bodies are leased out to the fishermen community but the involvement of middlemen/contractors is rampant. Their presence and influence are so dominant that they somehow manage to make an entry into the system and take the sheen away from poor fishers. The contractors take away a major share of profit in fishery whereas the fisher communities involved only in fishing, weed clearing and netting activities receive low wages which can never be helpful to bring transformative changes in their lives. They need to be put in the driver’s seat of this business and control all factors in the value chain. In addition to the challenges in access to water bodies and fishing rights, the fisher communities face a variety of issues in promotion of fishing. The most common problem is the access to quality seed and technology for fish farming which are in the control of organised businesses. Inadequate availability of credit is another issue, which compels the poor fisher communities not to invest in fish farming. The big and organised businesses need to be brought under appropriate regulations to compulsorily assist poor fishermen to build vibrant businesses. In the end, these big companies may get into marketing and processing understanding with organisation of fishers (viz. Producer Company) to take the business forward and work on a win-win formula.
PRIORITIES ON WHICH NATIONAL FISHERIES POLICY NEEDS TO BE INFORMED AND INCORPORATED

In the context of building and strengthening fishing ecosystems in favour of those at the BOP, the following challenges need to be taken into consideration to develop fishing as a business and make it work well for poor fishers.

- Fishery is not treated at par with Agriculture in the context of taxes, electricity tariff, etc. There is absence of Fishery/ Aquaculture Policy at national level which is still in the draft stage.

- Non-coverage of fish farming under insurance.

- Absence of facilitating organisations to promote/ support fishery development and fish farming as a business activity or enterprise.

- Poor extension services to the fisher communities for promotion of fish seed and feed production.

- There is no visible discussion around Producer Companies which provide the appropriate model and platform having structural strength to bring sustainability, respectability and achieve economy of scale in fish business by bringing small fishermen together.

- A targeted fishery development and promotion package exclusively focusing on ponds and tanks should be developed as a part of national fishery policy so as to encourage planned and controlled fishing. This would provide opportunity to poor fishers to target farming of most sought after types of fish, stabilise fish yield and bring uniformity in size of fish to realize both scale and value in the market.

- Issuance of inclusive business and investment promotion guidelines to MNCs operating in this space to partner with poor fishers’ business organisations like Producer Companies.

DISCUSSION AND WAY FORWARD

The vast untapped potential available to BOP based business initiatives in the fishery sector can be leveraged to focus on impoverished fisher communities in India as there exists the need to develop a more nuanced understanding of the dynamics of this ‘untapped market’. Permanently extricating people out of poverty requires a profound change in prevalent practices to bring about growth, development and progress especially in the context of the complex relationship that is in play between enterprises, governments and communities, where poverty is not simply equated to a deficiency of income or lack of access to services. Analysis of limited literature as cited in this work by the author indicates that BOP based business ventures have not yet leveraged their unlimited potential to amplify their contributions to the social welfare of the population they are striving to target as a part of their
business plan. The author draws upon Amartya Sen’s capability approach to argue that social welfare is unlikely to improve without giving the BOP the ability to pursue new market-based business opportunities. At the same time, without fostering a socially enabling environment for business organisations of the poor, it is unlikely that big business ventures would build capabilities of the social enterprises operating at the BOP. Indeed, the social capital literature indicates that knowledge and capabilities transfer is highly dependent on the social context and generating social capital in the form of stronger business organisations of the poor can facilitate capability building at the BOP.

At a broader level, ‘capable’ or ‘empowered’ communities can add to the plurality of choices and solutions in the battle against rising above poverty line, where market-based solutions are being increasingly offered as viable alternatives to more traditional state-centric approaches for poverty alleviation. It may be pursued along with other poverty alleviation measures formulated by the Government because depending on only market-based solutions may not be fundamentally acceptable until strong as well as widespread evidences of business success at the BOP emerge. Given their increasing economic and political clout, MNCs will have to take responsibility for bringing solutions to larger socio-economic challenges that the country is grappling with. While the BOP approach is a welcome step in this direction, in order to benefit the poor, it needs to be more community-centric and focus on building capabilities in BOP communities. Indeed, BOP empowerment can occur only when businesses and governments include communities as equal partners within a collaborative process of co-evolution in a market-driven business development context.

In the present ecosystem all over the country, there are inadequate initiatives for infrastructure development for product diversification and market development in fishery to assist poor fishers to control fishing activity in their own communities. Auctioning option often makes it a challenge for the poorer section to avail the water bodies on lease. This leads to indulgence of middlemen in the process of leasing and taking the water bodies on lease. Existence and persistence of such an ecosystem in the inland fishery sector calls for organising poor fishers under business friendly organisations like Producer Companies which can prepare them well to compete with organised businesses through provision of suitable capacity building, resource support, market linkage strategy and hand holding. These steps would certainly help poor learn to effectively run and manage fishing as a sustainable business enterprise.

Further, facilities provided under all available schemes and provisions made in support of the poor do not aim at making poor fishers enter an entrepreneurial activity with confidence and cannot automatically make poor fishers learn business acumen and get linked to the market which is a powerful platform for gaining competitive advantage to maximise profit earning potential. Provision of lease, credit facility, subsidy, etc. wouldn’t teach them how to run a business enterprise and make it effective to earn profit towards generating steady flow of income. Provision of all kinds of support would be worthwhile if poor
successfully enter the market, learn how to compete and remain engaged with the market in the long run. This would not only eliminate middlemen and exploitative contractors, but would release the resources saved by such elimination in favour of the fishermen as well as the customer. Otherwise, bringing in qualitative change in their lives would remain a pipedream like it has been in the past.

The current support system is heavily tilted in favour of collectives such as, cooperatives, self-help groups, etc. which are not structured to run businesses successfully. Hence, Producer Companies as better packaged business enterprises which have come into being because of Government’s own decision need adequate policy support to get going in the fish business and thrive there successfully thereby building sustainable and self-reliant fishing communities at the village and community levels.

The enabling roles that are envisaged for MNCs in this paper, would certainly help in taking forward in sharpening the business acumen and skills of poor fishers and further the goal of building stronger and sustainable local business platforms which would consistently contribute towards a steady flow of incomes to poor households thereby helping them to remain out of poverty in the long-run.

In order to put this process into action on ground to see what results these would bring about, it is desirable to issue an advisory to each MNC operating in the fishery sector or food processing (specifically related to fish based food) sector to promote as well as partner with at least five Producer Companies each in top ten states of the country which have highest areas covered by ponds and tanks, i.e. Andhra Pradesh, Karnataka, Arunachal Pradesh, West Bengal, Rajasthan, Uttar Pradesh, Odisha, Maharashtra, Madhya Pradesh and Tamil Nadu (Annual Report, GOI, 2017-18). If this is carried out for ten years on a top priority basis within the fishery sector, the outcomes would be certainly encouraging for others to follow.

LIMITATIONS

There are two main limitations of this study: (a) the discussions are based on experience of the author in a few villages; (b) discussions and recommendations are based on observations of the prevailing conditions in the villages and what local traditional fishers say on this subject.

Immediate research could be taken up by collecting case studies of successful fish farming carried out by fishers’ Producer Companies either on their own or in partnership with other supporting organisations based on specific business models. Such case studies would help prepare a Standard Operating Procedure (SOP) along the entire value chain of pond and tank based fish farming as well as specify what worked well and which did not. Action research could be taken up to assess which fish varieties attract premium value in the business-to-business (B2B) as well as business-to-consumer (B2C) market segments across different states. People have gradually become very health conscious. Keeping peoples' healthy choices in view, which varieties of fish are most preferred across different geographical areas of the country could be specified and accordingly, business models could be planned and rolled out.
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