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## Research on the social economy of dried fish in South and Southeast Asia

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In collaboration with 47 colleagues from seven countries and 20 institutions, including CIFRI, I am leading the proposed project Dried fish matters: mapping the social economy of dried fish in South and Southeast Asia for enhanced wellbeing and nutrition. There is good reason to think that the proposal is likely to be funded and, regardless, I think it lays out a path breaking and important area for research that it is worthwhile introducing. In this summary of the Dried Fish Matters proposal I provide an overview of the project's focus and then suggest a few questions that highlight why we think CIFRI stands to make a key contribution to the project.

The Dried Fish Matters proposal has been submitted to the Social Sciences and Humanities Research Council of Canada (SSHRC) under that organization's Partnership Grants funding program. SSHRC's mandate is to fund research on topics related to the social sciences and humanities, but the Partnership Grants program permits, and encourages, transdisciplinary research collaboration. Dried Fish Matters thus brings together not only classic social scientists and humanities scholars - anthropologists, geographers, economists, sociologists, and historians - but also natural scientists, policy makers, and participants from civil society. This wide range of disciplinary expertise, and participation by actors who work in and with the sector, is appropriate to the scope of the Dried Fish Matters project, which sees the dried fish economy as a multi-dimensional and complex focus for research attention. The project is premised on the idea that the shape and operation of the dried fish economy cannot be understood in economic terms alone.

Dried fish value chains must be analyzed as social products, or social economies, whose shape and function reflect the histories, cultural influences, and social relations that are so variable around South and Southeast Asia. It is not possible, for example, to understand the flows of dried fish around the region and elsewhere without taking into account factors like the central place of fish in Bengali or Thai cuisine.

The Dried Fish Matters proposal begins with the recognition that while South and Southeast Asian countries are developing rapidly, food insecurity and malnutrition continue to be major problems for those living in poverty (e.g. von Grebmer, K. et al. 2012; Tulchinsky, T.H. 2010). Research indicates that dried fish contributes a large percentage of key micronutrients to the diets of the poor in parts of South and Southeast Asia, and that its production and trade are important sources of livelihoods and employment, yet there are serious concerns about the stability and long-term viability of the dried fish economy. These concerns are exacerbated by a lack of research and knowledge-sharing across regions, disciplines, and sectors. The purpose of the project is thus to examine how value is created in the dried fish economy at all stages of activity, from production through processing, exchange, and consumption, viewing value chains as a framework for understanding human economic activity in the context of social, ecological, cultural, historical, political, and other factors.

The objectives of the project are to

1. Produce a comprehensive study of the Indian Ocean dried fish economy, with attention to historical, social, cultural, economic, and policy variability;
2. Conduct fine-grained studies of the structure, operation, and dynamics of each segment of dried fish

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**Derek Johnson** (✉)

Department of Anthropology, University of Manitoba,  
Winnipeg, Canada  
e-mail: [Derek.johnson@umanitoba.ca](mailto:Derek.johnson@umanitoba.ca)





**Fig. 1** Small dried fish at the Parbatipur dried fish market



**Fig. 2** Project focus countries and regions in India  
(image from Wiki Commons - CCASA 3.0)

value chains in selected sites across South and Southeast Asia;

3. Assess the contribution of dried fish to the food and nutrition security of rural and urban populations, and;
4. Identify and promote priority policy recommendations and development interventions to enhance the food and nutrition security, food safety, and sustainable and socially just livelihoods of marginalized populations to relevant state agencies and civil society organizations.

An illustration of the complexity of the dried fish economy and the challenges of ensuring its sustainability is evident in Bangladesh inland fisheries. My Master's student Md. Mahfuzar Rahman conducted research in Parbatipur District in northwestern Bangladesh for four months in 2016 (Rahman 2017). He found that there have been major structural changes that have transformed inland fisheries in that area over the past forty years. Many of these relate to major infrastructural, technical, and institutional changes associated with Green Revolution agriculture, while others are directly associated with efforts to increase fish production through aquacultural intensification. Changes have included declining availability of open

water areas for inland capture fisheries, reductions in wild fish populations, and the increasing presence of non-fishers in fishing and aquaculture. While Rahman did not look specifically at dried fish, the implications of his research are that local sources of supply of small and nutritious dried fish are becoming more constrained. This likely has resulted in changes in the types of locally available dried fish, and potentially increased prices and therefore impacts on nutrition security for poorer local populations.

Rahman's research illustrates the kinds of rich qualitative insights that the project hopes to generate (see also Belton et al. 2018). As the objectives above indicate, however, the project aspires to link such insights to broader patterns in the region's dried fish economy. These include patterns of change and patterns of production, processing, distribution, and consumption that mark different segments of dried fish value chains. We will employ a large-scale stacked value chain approach (Reardon et al. 2012) to gather the data to make large-scale generalizations about the functioning of dried fish value chains in the project's six countries of focus (Fig. 2). In India, the project plans to focus on four regions: West Bengal, Andhra Pradesh and Telangana, Kerala, and Gujarat. The first regional-level understanding of the social economy of dried fish in South and Southeast Asia that the project generates should also be a solid basis for making well-grounded recommendations for policy and development interventions designed to strengthen the sector, and the livelihoods, food, and nutrition security benefits that it provides. This last point is the third major area of work in the project, captured in objectives three and four.

The outcomes that Dried Fish Matters seeks to achieve are in three primary areas. First, the project intends to make a landmark contribution in terms of knowledge. It will generate the first regional level understanding of the social economy of dried fish in South and Southeast Asia. It will also develop a multi-scale method for analyzing dried fish value chains in broad, transdisciplinary terms. Second, it will develop novel mechanisms for generating and sharing knowledge about the social economy of dried fish. The generation of knowledge will grow out of its large-scale, multi-partner project design that will facilitate exchange of ideas and expertise. It will also allow for future expansion as other potential collaborators, partners, and research areas are linked with the original Dried Fish



Matters team. Knowledge dissemination will occur across multiple media, including traditional academic publications and through an online platform that will likely be developed as an add-on to the existing Information System for Small-scale Fisheries (<https://issfcloud.toobigtoignore.net/>). Third, the project has a major capacity building component. This will come through exchange between partner organizations and through the very significant role that students, post-doctoral researchers, and early career scientists from the participant countries will have in the project.

The Central Inland Fisheries Research Institute's areas of expertise are directly complementary to the objectives and needs of the Dried Fish Matters project. CIFRI's work on value addition in fish value chains, its expertise in inland fish biology and ecology and nutritional analysis, and its central role and experience in policy related to inland fisheries are all highly relevant to the project's ambitions. At the same time, the Dried Fish Matters project's focus on dried fish may open up new areas of inquiry and new opportunities to CIFRI for knowledge sharing and capacity building with other project partners. The project can stimulate attention to a wide variety of questions that may not be well understood. Examples of such questions include, what proportion of inland fish in India are dried? What proportion of India's total dried fish production comes from inland sources? How important are dried inland fish for the food and nutrition security of rural and urban poor populations? What is the structure of value chains in India for dried inland fish? How are these inland dried fish value chains shaped by social and cultural factors? How have these inland dried fish value chains changed over time? Are dried inland fish from India exported? If so, where, and in what volumes? What are the dominant species that constitute dried inland fish production? Have these species changed over time? What is their comparative nutritional constitution? How

widespread are problems of contaminants or biohazards in dried inland fish products? Responding to many of these questions, what are necessary and appropriate interventions that CIFRI can lead to address the shortcomings of current economic arrangements with regard to dried fish in India? What can CIFRI learn from interventions in other countries and sectors?

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