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Final report

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Foresight for sustainable food systems in the Eastern Gangetic Plains

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Contents

1 Acknowledgments

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2 Executive summary

Economic transformation in Bangladesh, India, and Nepal offers new opportunities and challenges for the smallholder farmers in the region. Some of these opportunities and challenges are predictable and already apparent while many others are not. Whether leveraging the opportunities offered by rapid economic transformation or addressing the new challenges created by it, both require foresight and a systems-oriented approach to research and policymakers.

The goal of the Short Research Activity (SRA) on 'Foresight for Food Systems in the Eastern Gangetic Plains (EGP): Status, Synthesis, and Stakeholder Engagement on Current Understanding' was to lay down the groundwork for an open, scientifically informed and participatory foresight for food exercise in the EGP region, led by regional scientists and entrepreneurs, and policy-makers.

IFPRI and its partners undertook four sets of activities to achieve the objectives of the project:

1. We convened a group of researchers, farmer leaders, and policymakers who were interested in foresight and scenario building exercises for a more sustainable food system.
2. We organized training and capacity building of regional actors to develop a shared understanding of what foresight for food means and how to carry out foresight and scenario building exercises.
3. We organized 6 workshops, where more than 200 researchers, planners, policymakers, entrepreneurs, civil society members came together for planning, learning, and information sharing. These workshops helped us build and strengthen a core group that is interested in undertaking foresight for food exercises in the region. The workshops also helped us generate new ideas, gain new perspectives, and disseminate our research findings.
4. We prepared 9 short status papers on different components of the food systems in the EGP region highlighting the key facts, trends and patterns, and gaps in our understanding of the dynamics of each component. We also prepared two reports on food systems in Bangladesh and Nepal; 4 chapters on different aspects of India's food system and 4 research papers on a) food trade in EGP countries; b) comparing Indian diets with the EAT-

Lancer reference diets; c) demand elasticities of different food items in rural and urban India; and d) farmers' response to food policies and weather shocks.

Most of the existing food system mapping exercises focus on nutritional and health outcomes. Our analysis in this SRA used the food-energy-water nexus lens to understand the food system in the EGP and focused more on sustainable environmental and resource management aspect. The role of women in the region's food systems and the implications for them if the food system follows different trajectories of change was a core concern for all our analytical work and the workshops we organized in this SRA. Women scientists were actively involved in all components of the SRA: planning, analysis, sharing, and dissemination of the project findings through workshops and publications.

This SRA synthesised the currently available information on different components of food systems in EGP, identified big data and evidence gaps, generated new ideas for research and generated excitement for using the foresight approach to understand food systems in a larger stakeholder community that participated in various activities of this SRA.

3 Background

Food systems in the EGP face major challenges from high and rising population pressure on land, small landholdings, high burden of poverty and malnutrition, increasing urbanization, stagnating farm incomes and the rising disparity between farm and non-farm incomes and increased uncertainty due to climate change. At the same time, rapid economic growth and technological progress are transforming the South Asian economy, generating new opportunities for agriculture to become a more specialized and remunerative enterprise with less drudgery for smallholder women and men farmers and agricultural labourers.

Whether leveraging the opportunities offered by rapid economic transformation or addressing the new challenges created by it, both require a systems-oriented approach to research, policy planning, and implementation to reshape food systems. A reasonable understanding of the food system, its different components, and the way they relate to each other is essential to develop a system-oriented approach.

This project sought to lay down the groundwork for an open, scientifically informed and participatory foresight for food exercise in the EGP region, led by regional scientists and other stakeholders including policy-makers, the private sector, and farmers. The project undertook a series of activities as inputs to a subsequent foresight and scenario building exercises. These included:

a. Initiation of a Community of Practice to support foresight work in the region.
b. Preparation of status briefs on different aspects of the food system in EGP.
c. Capacity building workshops.
d. Engaging young women and men scientists to prepare food systems reports and status briefs for Bangladesh, India, and Nepal.
e. Stakeholder dialogues with federal, provincial, and municipal level policymakers in Kathmandu, Nepal.

4 Objectives

The overall objective of the SRA is to create and collate the knowledge base and build a core team of local partners as a basis from which to undertake 'foresight for food' exercises in the EGP, to facilitate the sustainable intensification of agriculture in the region.

Specific objectives of the SRA are to:

1. Develop an improved understanding of the food system in the EGP region using a Food-Energy-Water nexus lens.
2. Identify drivers of change in the key components of the food system and the risks and uncertainties in the future.
3. Help create a Community of Practice to support foresight and scenario analysis.

Key outputs of the project include:

1. A 'Community of Practice' in the EGP region focused on 'foresight for food', and able to facilitate a long-term application of the approach.

2. Three regional/national level analytical descriptions of the EGP food systems, one each for Bangladesh, India and Nepal.

3. A set of status briefs on different components of the food system for better understanding of the current status, future challenges and research and knowledge gaps for informed policy making for a sustainable future.

4. A knowledge repository with databases, information and published and grey literature that may be useful for undertaking an informed foresight for food exercise.

5. Improved capacity and increased engagement of national partners to undertake foresight and scenario building exercises.

5 Methodology

We undertook the following steps to achieve the project objectives.

1. Convening of a core group of researchers and policy-makers to create food system maps and carry out foresight and scenario analyses.

2. A series of 9 short status papers have been prepared on key aspects of the food system in Bangladesh, eastern India, and Nepal to trigger discussion among stakeholders and draw their attention to key challenges and risks and uncertainties and identify areas where more research is needed to fill the information gaps for better decision making. We did extra work on status briefs on a) diets in India, b) food trade in South Asia, and c) food policies in India, with the intention to convert them into publishable papers

3. The project partners prepared national food system reports illustrating key relationships and dynamics of food, water, and energy. The food system maps also highlighted the important drivers of change in the food system and future risks and uncertainties.

4. We organized two foresight events with researchers and key national and regional decision-makers to increase their interest and involvement in the foresight for food exercises and to develop their capacities for foresight and scenario analysis. For capacity building, we held a 4-day learning workshop where participants from all 3 countries of the EGP participated in a series of exercises to get a better idea of how to conduct food system mapping, scenario planning, and foresight for food activities and worked in groups to develop proposals for local/community level foresight exercises in West Bengal, Bangladesh, and the Nepal Terai.

5. To generate greater interest in foresight processes in national institutions was a major goal of this SRA. We involved a wider group of researchers and research institutions beyond the three core partners (IFPRI, BAU, and GGED) in workshops and the preparation of status briefs and food system reports.

6. Finally, we will also conduct a training workshop in partnership with CCAFS on the concept of foresight for food and the processes and techniques involved in carrying out foresight and scenario building exercises. Young researchers and policymakers from the region will be invited to the training.

6 Achievements against activities and outputs/milestones

Outputs and outcomes of the SRA include the following:

Objective 1: To develop an improved understanding of the food system in the EGP region using a Food-Energy-Water nexus lens; and

Objective 3: To help create a Community of Practice to support foresight and scenario analysis

no.	activity	outputs/ milestones	completion date	comments
1.1	Project Planning Workshop in Kathmandu, Nepal	Partners from the EGP region provided useful inputs for the design of the SRA and they learned more about food system mapping through practice sessions in small groups	September 2018	Nearly 30 participants from all 3 countries attended this workshop. The workshop report is available on request.
1.2	Learning workshop in Kathmandu, Nepal	60 local experts from different sectors participated in a 4-day workshop where they learned different techniques/approaches for food system mapping, scenario building, and using different modeling approaches for foresight for food through a series of participatory group exercises. Participants used the 4-days practice exercises to develop proposals for local foresight for food activities and presented those ideas to the project steering committee on the final day of the workshop.	February 2019	This workshop had almost equal representation of women and men scientists and young women scientists from the region were actively involved in all group exercises and presentations to the larger group. Presentations are available here.
1.3	Food system dialogue for Nepal with a focus on province 2	Nearly 40 policymakers from federal, state, and municipal governments, representatives of civil society organizations, and think tanks discussed emerging governance challenges for the food in Nepal, especially, province 2—the food basket of Nepal.	July 2019	This dialogue was not proposed in the SRA proposal. We organized it on the request of stakeholders in Nepal.
1.4	Stakeholder dialogue on the federalization of government in Nepal	Researchers from Nepalese and international think tanks based in Nepal discussed ways to generate scientific and policy-relevant ideas and evidence to improve resource management and extension under the new federal structure of government in Nepal	July 2019	This dialogue was not proposed in the SRA proposal. We organized it on the request of stakeholders in Nepal.

no.	activity	outputs/ milestones	completion date	comments
1.5	A workshop session on Gender and Natural Resource Management	The workshop was organized by the JNU, New Delhi. The session supported by this SRA focused on women's role in agriculture in Bangladesh, India, and Nepal; the data inconsistencies in measuring women's contribution, role of women in water management in West Bengal, and gender, land and work in West Bengal and Gujarat	March 2019	This session was proposed by JNU and we agreed to support it in this SRA to broaden the coalition of partners engaged in foresight for food activities, and more so to have experts who analyse food systems with a focus on women.
1.6	A half-day session in the National Food Systems Dialogues 2019 organized in New Delhi by a farmers' organization in collaboration with Dr. David Nabarro and the World Economic Forum	IFPRI was invited to design and organize a half-day session on Agriculture, Diet, and nutrition in India in this national dialogue attended by more than 200 participants state and central governments, private sector, farmer organizations and national & international think tanks.	November 2019	Highlights of discussions in our session were presented in the plenary session of the dialogue to the Chief Economic Advisor to the Government of India and Member, NITI Aayog.

PC = partner country, A = Australia

Objective 2: To identify drivers of change in the key components of the food system and the risks and uncertainties in the future.

no.	activity	outputs/ milestones	completion date	comments
2.1	Preparation of status briefs on different aspects of the food system in EGP	9 of the 10 proposed status briefs have been completed and shared on ACIAR's website. Please see Section 10.1 for the full list of status briefs.	February 2020	Authors of status briefs include 8 scientists from the local institutions of South Asia, including institutions that do not necessarily work on agriculture and food. The status briefs are available here.
2.2	Preparation of food system reports	2 Food system reports, one each on Bangladesh and Nepal were prepared by our partners from BAU and CGED, respectively. For India, we prepared 4 chapters on key aspects of its food system.	November 2019	We proposed to use the information in the food system reports prepared in this SRA to produce a regional food systems report for EGP.

no.	activity	outputs/ milestones	completion date	comments
2.3	Research papers on different aspects of food systems in India and South Asia	Building up on status briefs, three research papers have been prepared on a) food trade in South and South-east Asia, b) farmers' response to food policies in India; and c) the differences between EAT-LANCET recommendations and Indian diets.	March 2020	The preparation of full research papers was not a part of the SRA proposal.
2.4	A report on federalization in Nepal: opportunities and challenges with a focus on province 2	This report is based on a series of dialogues with all levels of policy-makers in Province 2 of Nepal.	October 2019	We organized a 2-day policy workshop to discuss findings of this report and to generate more ideas on the kinds of research, evidence and policy engagement that may help federalization work for smallholders in Nepal.

PC = partner country, A = Australia

7 Key results and discussion

We worked on multiple aspects of the EGP's food system. We report some of the key findings in this section.

- Policy distortions are a critical aspect of the food system in the region. The largest distortions are there in India where the central government spends nearly $30 billion year on food subsidies. 95% of this money is used to subsidize production and consumption of rice and wheat. These two crops account for less than 15% of India's agricultural GDP. Policies, programs and even research effort in all three countries focus disproportionately on rice and wheat even as consumption of fruits, vegetables, and animal products is rising with increases in incomes and urbanization.
- India's food policy complex of public procurement of rice and wheat at assured prices (MSP) and its distribution to nearly 20 million households at highly subsidized prices of Rs. 2 and 3 per kg through the public distribution system (PDS) hurts the rice and wheat farmers of Bihar and West Bengal and lowers producer prices because procurement at MSP from in these two states is less than the quantities disbursed through the PDS.
- High tariff and non-tariff barriers are also a major feature of the agriculture and food policies in the 3 countries. The food sector trade openness ratio, measured as the value of food imports and exports as a fraction of the total agricultural GDP, is much smaller for Bangladesh, India, and Nepal than their ASEAN neighbours. This restrictive trade regime hurts both producers and consumers in the region. Trade restrictions also give rise to informal or illegal trading across borders.
- Groundwater is the main source of irrigation in Bangladesh, Bihar, West Bengal, and Nepal Terai. Farmers in Bihar and Nepal Terai practice severe deficit irrigation due to the high cost of irrigation from diesel pumps. Deficit irrigation leads to lower productivity and low resilience to droughts. The Government of Bihar has launched a campaign to provide electricity connections to farmers. Electrification of irrigation will help in intensification of agriculture, but high subsidies on electricity tariffs for irrigation is a threat to the sustainability of aquifers in the state, especially, in the flood-free region south of the Ganga river.

- Landholdings in EGP are too small even by South Asian standards. Almost everyone is a marginal farmer and 1-acre plots are rather uncommon. Small holdings and relatively low productivity forces most farming families to rely on alternate sources of income. Migration of working- age men to cities is common in Bangladesh, Nepal, and Bihar. It is increasing even in West Bengal, traditionally a migrant recipient state. We know very little about how the migration of men affects women who stay behind.
- Female labour force participation in Bihar and West Bengal is low (around 15-20%) and declining. It is relatively high in Bangladesh and Nepal. That said, the existing data systems in all three countries underestimate women's contribution to the rural and agricultural economy. Labor force participation is measured differently in the three countries, and hence, the data are not comparable. Data collection and reporting on women's work needs to improve for more effective programs and policies for women.
- The entire EGP region is highly vulnerable to climate change. Climate models are fairly confident that the region will experience a rise in mean temperatures. Night-time minimums are projected to rise faster than day-time maximums and the number of extreme heat days is likely to triple by 2050. Projections of precipitation patterns are more uncertain. Different models have very different predictions. The number of dry spells and the frequency of extreme rainfalls may increase. Smallholder agriculture in the region has a low adaptive capacity. Reducing poverty and public investment in irrigation, mechanization, crop breeding, extension, and insurance against shocks will help farmers in the region to become more resilient to climate change.

While mapping the available evidence on different components of the food system and the inter-relationship between them, we found that the areas of the biggest knowledge gaps are:

- The relationship between the farm and non-farm economy in rural areas.
- The unincorporated (informal) off-farm food economy: its contribution to the total value creation, job creation, poverty reduction, and the drivers of growth of the informal off-farm food economy.

- Formal and informal food trade across international borders: volumes, value, and its impact on local farmers and consumers.
- The role of women in the farm and non-farm sectors of the rural economy: workforce participation, impact of men's migration on women, their access to credit, extension, markets, etc.
- Strategies to increase smallholders' share of consumers' expenditure on food: scalable aggregation models for input supply, extension, insurance, and marketable surplus.

8 Impacts

8.1 Scientific impacts – now and in 5 years

The status briefs and food system reports prepared in this SRA have highlighted the key areas of food systems in the EGP where data or evidence is missing. Stakeholder meetings were organized to discuss evidence gaps, and policy actions are required to generate better data and present it in ways that can lead to informed action at local and federal levels.

The work on this SRA helped identified at least four major evidence/research gaps on which IFPRI and other partners have already started further work.

Gender: The first major gap the SRA identified is the lack of data on a) intra-household differences in food consumption patterns; b) trends in female labor use in agriculture; c) the impact of agricultural mechanization on women working on family farms and women wage labourers; d) and the impact of men's migration for work on women who stay behind.

Informal Trade: The second gap is the lack of credible estimates of the volumes and the value of informal trade in food and agricultural inputs among countries in S. Asia. We do not even have good guesstimates of informal trade in the region. The informal trade plays an important role in ensuring food security in Nepal (and to some extent, even Bangladesh). It also helps in exchange of innovations across borders.

The Missing Middle: Third, there are millions of informal enterprises in the agriculture and food sector of the EGP. These small enterprises employ millions of people and make a significant contribution to the food sector GDP of the region. Some estimates suggest that the value contribution of these off-farm enterprises is growing much faster than agricultural GDP itself. However, we know very little about the size, the contribution, and the future of these enterprises and the entrepreneurs who run them and employees who work in them. Most existing food system mapping exercises completely ignore this large and very important component of the region's food system.

Food Subsidies: The fourth gap is the lack of research on how India's food subsidies affect farmers in the Eastern Gangetic plains. We know that the MSP incentivizes farmers to produce more rice and wheat and PDS subsidies act as welfare transfer to poor households. But public procurement of rice and wheat is still small in EGP states like Bihar and West Bengal while their PDS allocations are substantial. How the producer and

consumer subsidies in India affect incentives of rice and wheat growers in Bihar and West Bengal is not known or understood.

Participation in the SRA encouraged scientists from IFPRI and its regional partners to start research to fill the evidence gaps identified during this project. We believe that this has been a significant scientific impact of this SRA.

Our workshops, and especially the learning workshop organized in February 2019 in Kathmandu, have generated greater interest in the region to undertake foresight exercises at the local levels. In Nepal, our partner, CGED went beyond its original ToR and worked in Province 2 to understand how the creation of provinces and municipalities may affect farmers and the agricultural sector in the country.

We also hope that ACIAR will use the ideas and the evidence generated and collated in this SRA to inform its future programming in the EGP region. Regional institutions like CGED, ICAR-NIAP, IIDS, JNU, and UBKV have already picked up some of the themes for further research.

8.2 Capacity impacts – now and in 5 years

ACIAR and IFPRI organized a learning and professional development workshop titled 'Bracing up for the Future: Foresight & Scenario Analysis for Food Systems in South Asia' in Kathmandu, Nepal from 11th-14th February 2019. More than 60 participants from government, civil society organizations, private companies, research institutions and think tanks of Bangladesh, India, and Nepal participated in the event. The workshop had three main objectives:

- To bring actors from different sectors, disciplinary backgrounds, and geographical areas of the EGP together to develop a better understanding of the systems perspective on food and the value of foresight exercises,
- To expose participants to the key concepts, techniques, modeling tools and processes involved in foresight for food exercise through a series of participatory exercise, and
- To generate ideas for the future work on foresight for sustainable food systems in the EGP region that can be considered for implementation under the Sustainable Development Investment Portfolio.

We set out to achieve these objectives by bringing together leading experts and highly motivated and engaged partners from the region to engage in a series of interactive and practical exercises. Each day of the workshop had a clear set of

learning objectives and a set of group activities focused on different geographical areas of EGP or key thematic areas of the food systems. The structure included:

- Short presentations synthesizing our best understanding of the current food systems in the three countries;
- Interactive modules to introduce the framework for foresight analysis by experts with examples from other parts of the world;
- Practice sessions for a) mapping food system dynamics in the region and b) foresight exercises to develop a better understanding of how to use existing frameworks or techniques to inform policy discussions and decisions;
- Introduction to quantitative modeling of food systems at local and regional levels to get a better understanding of what sorts of modeling tools are available to answer different questions and when and how can we use them, and
- Participatory scenario-building exercises to understand ways in which it is different from forecasting and to learn how to use it to inform policy discussions in the face of uncertainties

Some of the young researchers in the workshop have gone on to study, in detail, specific aspects of the food system, supported by this SRA.

8.3 Community impacts – now and in 5 years

We organized 6 workshops and stakeholder dialogues as a part of this SRA on food systems and foresight for food in EGP. More than 200 academics, policymakers, farmers, representatives from private companies and CSOs actively participated in these events. Participants included a larger number of women from the region. They contributed new ideas and perspectives on the region's food systems and its future course. These events helped generate greater awareness and interest in the wider stakeholder community in food system mapping and foresight for food exercises. This is perhaps the most important impact of the SRA that will endure much longer after the SRA period.

8.3.1 Economic impacts

This SRA did not have any direct impact on the region's economy. We generated new evidence and carried out interesting analysis on women's contribution to the food economies in Bangladesh, India, and Nepal. We also analysed the trends and patterns in food trade among countries within the region. Our research will be useful for policymakers in the three countries.

8.3.2 Social impacts

We do not expect any direct social impacts of this project. Our partner, CGED's close coordination with local and provincial level officials in province 2 of the country may contribute to more careful thinking about programs for smallholder farmers. If that happens, hundreds of thousands of farmers will benefit.

8.3.3 Environmental impacts

Our status brief on climate change and its likely impact on food systems in the region will be useful to the policymakers of all 3 countries. We also published a status brief stressing the need to switch from highly subsidized flat rate tariff to a more reasonable tariff regime for farmers using electric pumps for irrigation in Bihar to reduce wasteful use of water and energy. This status paper will contribute to the discussion on power tariff policies in Bihar and West Bengal.

8.4 Communication and dissemination activities

a. Publication of 9 Status Briefs on different aspects of food systems in EGP. A communications expert designed the layout of the status briefs. The status briefs have been posted on the ACIAR SDIP website.
b. We organized 4 workshops to i) communicate the need for undertaking foresight for food exercises with a systems approach, ii) expose researchers, policymakers, and representatives from private companies to different approaches to participatory food system mapping, foresight, and scenario building; iii) generate ideas for more relevant research and evidence generation to make federalization work better for farmers in Nepal, and iv) share findings of a study in province 2 Nepal on federalization and its impact on food systems in the country.
c. We also hosted and conceptualized a half-day session in the National Food Systems Dialogue organized by the Bharat Krishak Samaj, a farmer organization, with support from Dr. David Nabarro and the World Economic Forum (WEF).
d. We supported a session on Gender and Natural Resource Management in a larger conference organized by the Indian Institute of Geographers in JNU, New Delhi in March 2019. This session focused on measuring and understanding women's contribution to agriculture and land and water management in India (West Bengal and Gujarat), Bangladesh, and Nepal.

9 Conclusions and recommendations

We worked on a number of different components of the food system in Bangladesh, India, and Nepal in this project. We also organized a series of workshops for planning, learning, and sharing our findings. Accordingly, our conclusions and recommendations cover a broad range of opportunities for research and policy and community engagement for work on foresight for food systems in the region.

9.1 Conclusions

a. There is a lot of interest in food system mapping in the region. We were pleasantly surprised by the attendance and the involvement in the 4-day learning workshop on foresight for food in EGP. Academics and the policymakers present in the workshop showed great interest in learning and applying foresight tools.
b. Researchers from the region are keen to learn new modelling tools for foresight and scenario building. Projects focused on imparting these skills to NARS researchers will be very well received.
c. Most of the existing projects on food systems in South Asia focus on diet and nutritional outcomes. There is a need to highlight the critical role of resource management (Food-energy-water nexus) in the food systems.
d. Existing food systems reports in South Asia pay very little attention to international trade in food. This is probably because of the more restrictive trade regime in the region.
e. Informal enterprises dominate EGP's (and Asia's) food systems. However, there is very little systematic analysis of the size, contribution, opportunities, and challenges of these informal enterprises in food system mapping exercises.
f. We have very little data for even basic analyses of women's changing role and contribution to agriculture and larger food systems in the region.

9.2 Recommendations

- *Projects on gendered data:* We learned from our own work in this SRA and the SRA managed by Prof. Sucharita Sen that quality research on women in agriculture and food systems requires better data. ACIAR should support projects that will sensitize policy-makers and research institutions in the EGP to collect and present gender disaggregated data. Projects focused on different aspects of data

collection and presentation will have a long-term impact in the region on research and policymaking.

- *Demand for training on modelling tools:* Young researchers from the EGP countries are keen to learn different kinds of modelling tools and their applications. We got feedback from the participants in the 4-day learning workshop we organized in February 2019 in Kathmandu to organize longer, more intensive workshops focused on one or two models like IMPACT or APSIM.

- *Focused partnerships with researchers:* Partnership with researchers from the region on small, well-defined tasks tremendously increased our productivity. Setting aside even small amounts of money for project managers to build such focused partnerships with interested individuals or institutions can be a great way to i) generate more interest in research on sustainable intensification of agriculture, ii) support bright young researchers in the region; iii) tap into a more diverse pool of academic expertise and policy perspectives, and iv) make our projects more productive.

- Foresight for food projects will have more policy and community buy-in if they also address the existing priorities and challenges of different stakeholders, while encouraging them to envision future scenarios.

10 References

10.1 List of publications produced by the project

10.1.1 Status Reports

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10.1.2 Discussion Papers

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10.1.3 Project Reports and Pre-publication Discussion Papers

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Hajrana, Jaweriah, Avinash Kishore, and Devesh Roy. "Supply Response of Staple Food Crops in the Presence of Policy Distortions: Some Evidence from India." *Pre-publication Discussion Paper.*

Hajrana, Jaweriah and Avinash Kishore. "Demographic Changes in India."

Hajrana, Jaweriah and Avinash Kishore. “The Nutrition Transition in India: Emergent Trends, Dietary Changes and Expenditure Patterns.”

Hajrana, Jaweriah and Avinash Kishore. “A Comparative Analysis of Value of Output of Different Agricultural Commodities in India.”

Hajrana, Jaweriah and Avinash Kishore. “Trends and Patterns in Agricultural Marketed and Marketable Surplus, Channels of Sales, and Price Realizations in India.”

Karki, Madhav and Roshan Subedi. Understanding the Food System in Nepal through the lens of Food-Water-Energy-Biodiversity Nexus.

Alam, Mohammad Jahangir. Analysis of the Food System in Bangladesh from a Food-Energy-Water Nexus Lens.

10.1.4 Workshop Reports

Report on Follow-up Workshop on Foresight for Sustainable Food Systems in the EGP. 23rd September 2018, Kathmandu, Nepal.

Report on a Participatory Exercise on Foresight for Food Systems in South Asia. 11-14 February 2019. Kathmandu, Nepal.

Report on Research Synthesis Workshop and the Knowledge Policy Dialogue in Nepal. 10-11 July, Kathmandu, Nepal.