

ACIAR SDIP Foresight Program: Status Report

# FOOD TRADE in Bangladesh, India and Nepal

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**Australian  
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# 1. Introduction

*“The world as a whole is more food secure than any one spot on the earth.”*

Food and agricultural trade among different parts of the world can increase access to a wider variety and better quality of agricultural inputs and foods to farmers and consumers at lower prices and increase incomes of farmers and other participants in the value chain. This report\* looks at the extent of food trade in Bangladesh, India and Nepal (BIN) among themselves and with the rest of the world using trade data from UN Comtrade (United Nations 2019) from 1996 to 2016. We also food trade in BIN with the neighbouring ASEAN countries who also have high dependence on agriculture. Food here includes a) cereals and vegetables, b) live animals and animal-based and c) processed foods. There is a lot of informal, undocumented trade across the 1751 km long open border between India and Nepal and the 4097 km porous Bangladesh-India border. However, our analysis covers only the formal trade because we do not have reliable estimates of the volume and the value of the informal food trade in the region<sup>1</sup>.

# 2. Food Trade in BIN Countries

## Exports

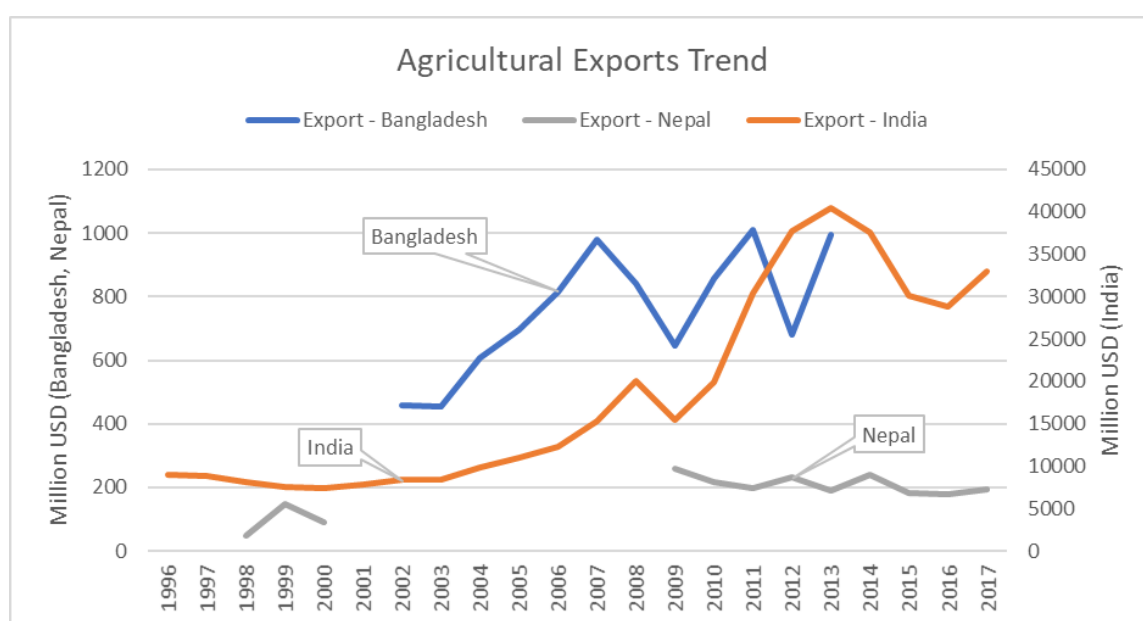


FIGURE 1 AGRICULTURAL EXPORT TREND OF BIN COUNTRIES

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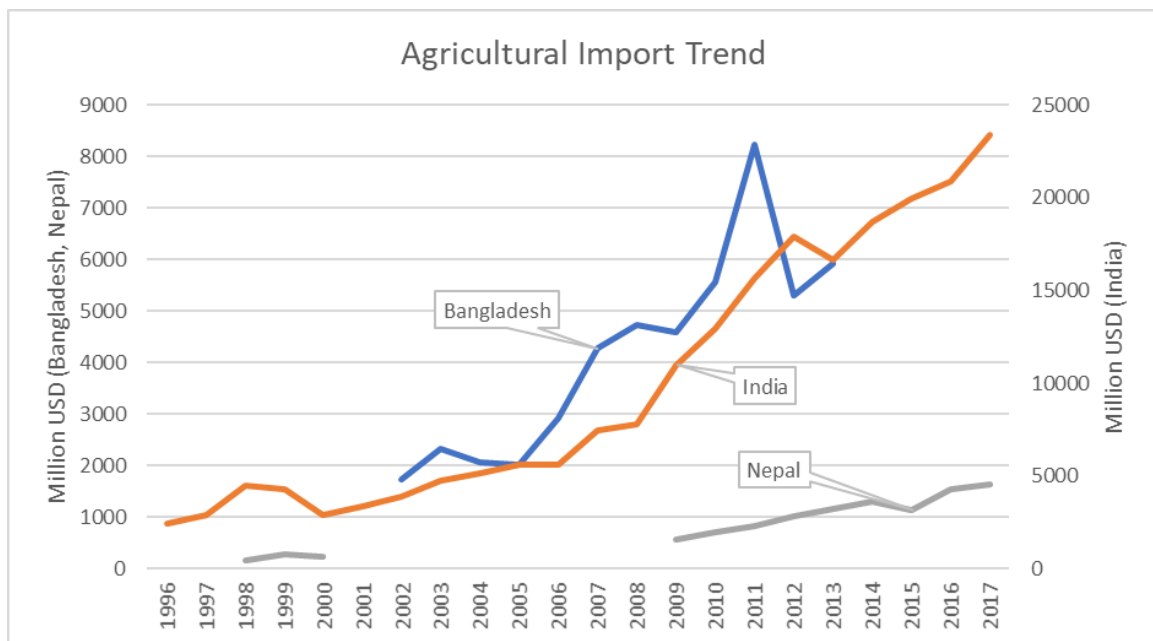
*This is a pre-publication discussion paper. It is not peer-reviewed and the views expressed here are of the author(s) alone and not of ACIAR, DFAT or IFPRI.*

<sup>1</sup> A recent World Bank report estimates that informal trade among south Asian countries was at least 50 percent of the formal trade and the informal trade between India and Nepal is as big as the formal trade (Kathuria, 2018).

**Figure 1** shows the real value of food exports and imports of Bangladesh, India and Nepal over time in 2012 prices. India’s food exports have grown rapidly from \$9 billion in 1996 to \$ 40.4 billion in 2013 and then declined to \$28.8 billion in 2016. Similarly, food exports of Bangladesh more than doubled between 2002 and 2007 from \$ 0.46 billion to \$ 0.98 billion but have stagnated since then in the range of \$ 0.8-1.0 bn. Nepal’s food exports also grew rapidly from about \$ 50 million in 1998 to more than \$250 million in 2009 but have declined since then. Thus, food exports of all three countries grew rapidly in the early 2000s and have stagnated or declined in recent years.

India is a large exporter of rice and animals & animal products. The share of animals & animal products in India’s total food exports increased from 22% in 2005 to 33% in 2016. Fish and fish products are the main exports of Bangladesh accounting for more than 40% of the total value of the country’s food exports. Nepal’s main food exports changed from animal & vegetable fats and oils in 2005 to edible vegetables and roots and tubers (e.g., ginger) in 2010 and coffee, tea and spices in 2016.

## Imports ■ ■ ■



**FIGURE 2 AGRICULTURAL IMPORTS OF BIN COUNTRIES**

Food imports of all three countries are growing rapidly at a compound annual growth rate (CAGR) of more than 10%. India runs a trade surplus in food trade while Bangladesh and Nepal have rapidly growing trade deficits which have increased 5-6 times in real terms over the last 15 years (**Figure 2**). Palm oil is the largest import of Bangladesh and India accounting for nearly 40% and 60% of the total value of their food imports respectively. Till 2010, palm oil was the largest food import of Nepal too. However, in recent years, cereals—mainly rice and wheat—have emerged as the largest imports of Nepal accounting for nearly one-third (29%) of the total value of its food imports. Nepal’s cereals imports have increased nearly 100 times over the last two decades—from \$ 4 million in 1998 to \$ 380 million in 2016.

## The Main Trading Partners of BIN

India is the main trading partner of Nepal for both its agricultural imports and exports. India is the destination of more than 75% of Nepal's food exports and the source of more than 60% of its food imports. Six countries—the United Kingdom (12%), Saudi Arabia (11.7%), Netherlands (9%), Belgium (8.6%), India (6.4%) and the United States (6.3%)—accounted for more than half (53.6%) of Bangladesh's total food exports in 2015. Indonesia (19%), India (14.9%), Brazil (14.3%), Argentina (8.7%), Canada (7.3%) and the United States (5.5%) were the largest sources of food imports for Bangladesh accounting for nearly 70% of its total value of food imports. Vietnam (11.6%), the United States (11.6%), UAE (6.2%), Saudi Arabia (5.6%), Iran (3.9%) and Malaysia (3.0%) are the major destinations of India's food exports while Indonesia (19.6%), Malaysia (11.4%), Argentina (9.7%), Ukraine (7.3%), Canada (5.8%), Brazil (5.7%) and the United States (5.2%) are the main sources of its food imports.

## Trade Openness

Trade openness is measured as the ratio of the total value of exports and imports of a country (or sector) to its GDP. Open trade is desirable because it allows access to larger markets, creates opportunities for specialization in production, and gains from economies of scale, technology transfers and knowledge spill over (Wacziarg and Welch, 2008). Greater openness to trade may also lead to an increase in the total amount and variety of foods available to the national population at lower prices.

**Figure 3** shows the trade openness ratios of the food sectors of Bangladesh, India and Nepal over the last 15 years and compares them to neighbouring ASEAN countries. Agricultural economies of BIN are much less open to international trade than the ASEAN countries.

**Figure 4** shows the stark difference in the export orientation of the agricultural sector of Bangladesh, India and Nepal in South Asia and Thailand, Malaysia and Vietnam in South-East Asia. Export orientation is the ratio of the value of exports of a country to its GDP. It is a common indicator of the outward orientation of an economy. Food exports of South Asian countries is less than one-tenth of their agricultural GDPs and the export shares have remained stagnant over the last 15 years. In comparison, total food export of Malaysia and Thailand are nearly equal to their agricultural GDP.

To increase their food exports, Bangladesh, India and Nepal need to lower the trade barriers, invest in infrastructure and set up efficient value-chains to produce cost-competitive, safe and high-quality agricultural products.

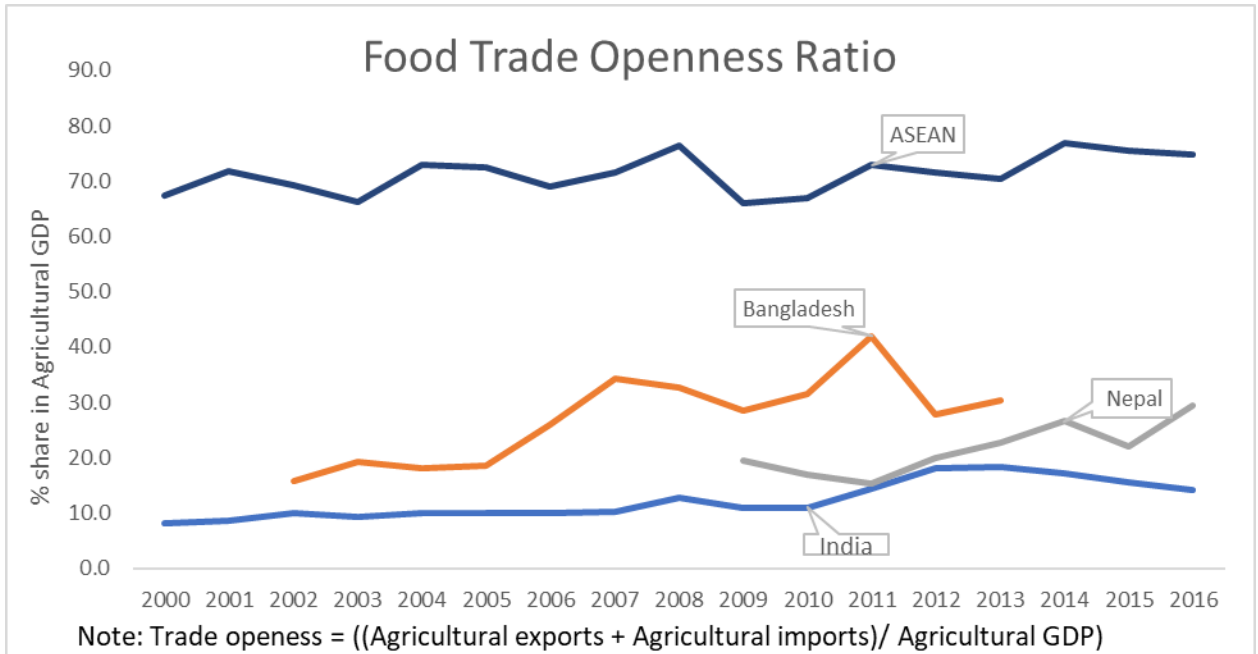


FIGURE 3 TRADE OPENNESS RATIOS OF THE FOOD SECTORS OF BIN AND ASEAN COUNTRIES

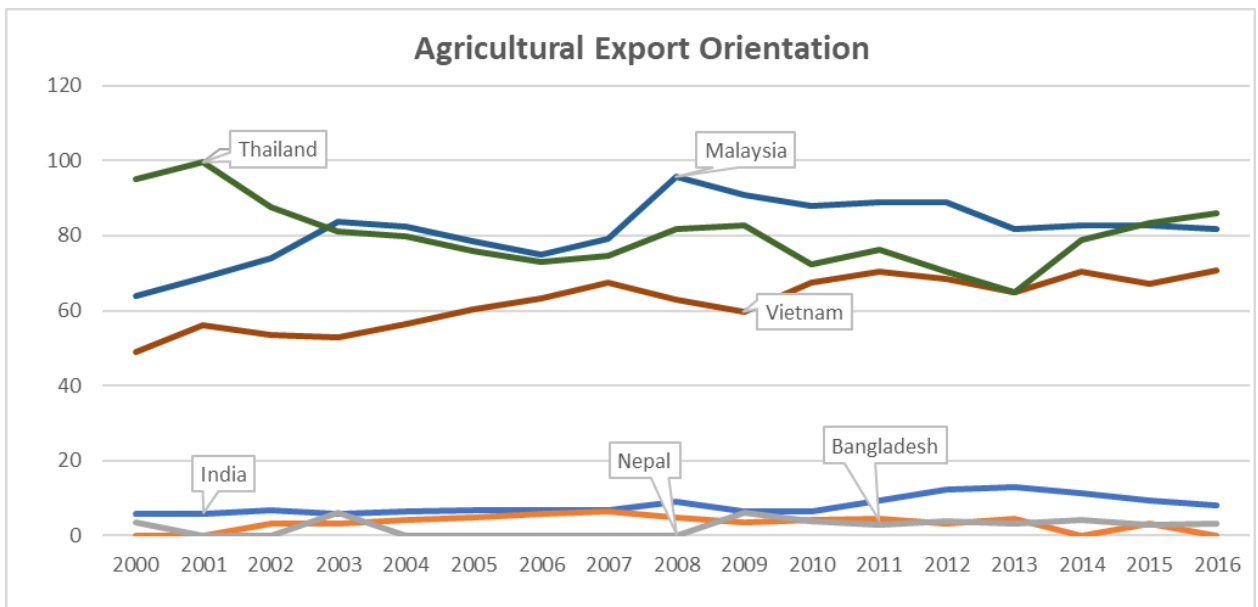


FIGURE 4 EXPORT ORIENTATION OF THE FOOD SECTORS OF BIN AND ASEAN COUNTRIES

### 3. Trading with Neighbours

The gravity model of international trade tells us that the value of trade is higher between neighbouring countries and countries with higher GDPs. The total agricultural GDP of Bangladesh, India and Nepal is 1.5 times the agricultural GDP of all ASEAN member states put together, but the total value of agricultural exports of ASEAN countries to other member states is 15 times higher than the value agricultural exports of Bangladesh, India and Nepal to each other. Intra-ASEAN agricultural exports are not only much larger in value, but they are also growing much faster than agricultural exports among BIN (Figure 5).

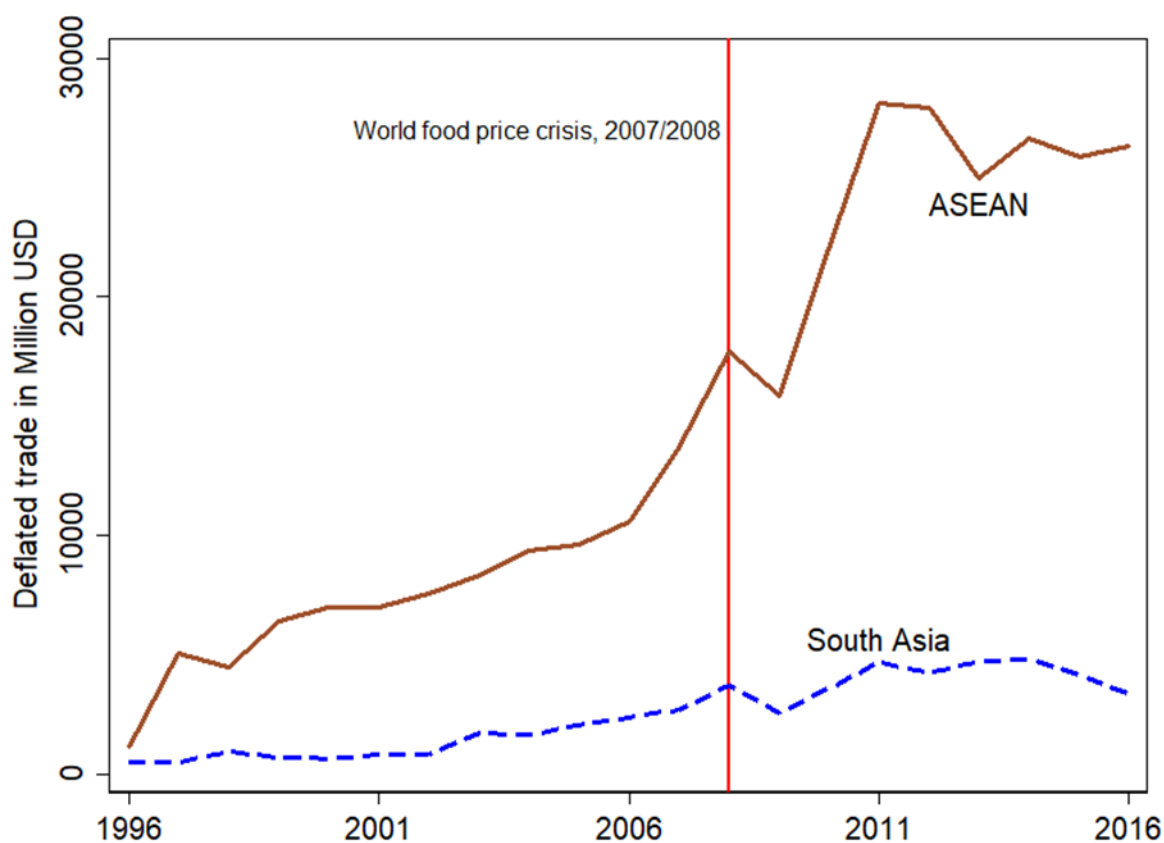


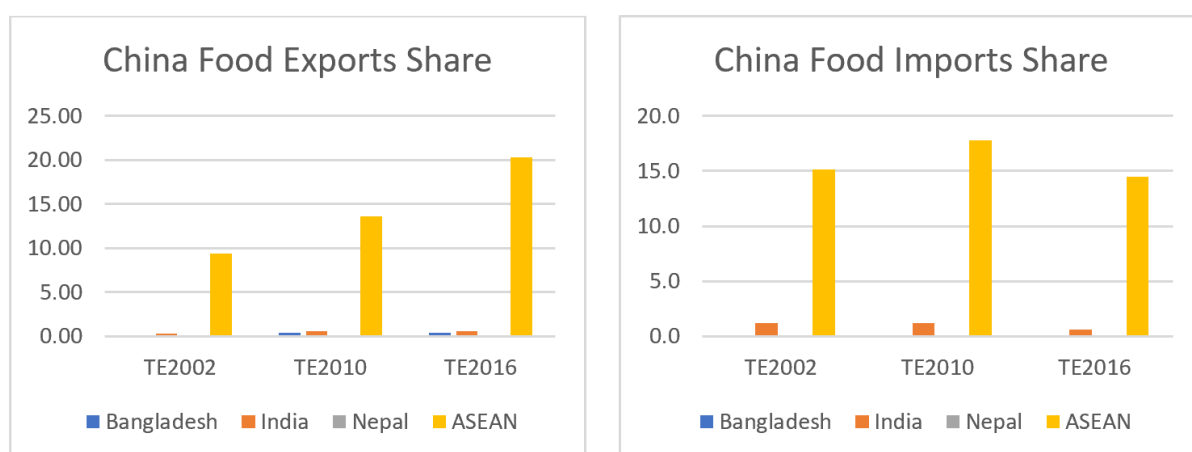
FIGURE 5 INTRA BIN AGRICULTURAL TRADE: COMPARING WITH INTRA ASEAN

Agricultural trade in BIN is not only small, but also not resilient to shocks. The global food price crisis in 2007-08 saw a reduction in agricultural trade across the world, but the BIN countries imposed more trade restrictions than other countries or regions. India completely banned exports of cereals and pulses. The intra-ASEAN agricultural trade shrunk by about 10% while the intra-BIN trade went down by as much as 30%. Reduced international trade in 2008 was followed by a sharp recovery in other regions of the world as the crisis dissipated. The recovery in the regional food trade in South Asia, however, was much slower. The intra-ASEAN agricultural exports increased by 77% from 2009 to 2011, compared to only a 43% increase in the Intra BIN agricultural exports.



Weather events like floods and droughts have a significant effect on domestic production and international trade of rice and pulses in BIN countries. A recent report on the political economy of rice trade between Bangladesh, India and Nepal shows that that regional rice trade is heavily influenced by floods in Bangladesh (The Asia Foundation, 2019). Drought in India often results in decline in domestic pulse production and sharp increase in pulse imports from Myanmar, Canada, Australia and other countries.

## 4. BIN Countries have captured less than 1% of China’s rapidly growing food imports



TE: Triennium

FIGURE 6 BIN COUNTRIES TRADE SHARE WITH CHINA

China is the world’s largest economy (in PPP terms) and the largest trading partner of Bangladesh and India. China has also emerged as a major importer of agricultural commodities from the rest of the world. Despite being neighbours, Bangladesh, India and Nepal together account for less than 1% of China’s total food imports, compared to 14-15% share of ASEAN countries. China is not a significant source of food imports for BIN countries either.

Unlike food commodities, China is a major source of agricultural equipment for BIN. Liberalization of imports of cheap pump-sets and power-tillers in the 1980s and 1990s led to a rapid increase in agricultural mechanization in Bangladesh while India and Nepal continued to rely on high tariffs and heavy capital subsidies to farmers to mechanize agriculture. Liberalization of imports has led to more widespread ownership of machines and more competitive machine rental markets in Bangladesh than India or Nepal even when there is no capital subsidy on machines in Bangladesh. Today, agriculture is more mechanized in Bangladesh than both India and Nepal (Biggs and Justice, 2015). In recent years, India and Nepal’s imports of agricultural equipment from China have also grown rapidly—from less than USD 10 million in 2004 to nearly \$150 million in 2016, demonstrating the potential scope of impact if the food sector could also link to the Chinese market.

## Conclusions

The formal food trade in Bangladesh, India and Nepal is much smaller than the neighbouring ASEAN countries. Both food exports and imports of the three countries are small relative to their agricultural GDPs. The food trade is not only small in value, but also highly vulnerable to domestic and international price shocks, weather events and swings in international relations. Both tariff and non-tariff barriers in BIN have led to their low trade openness. The policy quest for self-sufficiency in the production of rice and wheat (and other food items like pulses and sugar), even at the cost of resource depletion, is partly responsible for low values of food imports. Poorly developed value-chains, weak infrastructure, and low food safety standards limit the export potential. Ad hoc export bans to protect consumers from episodes of spikes in food prices are also responsible for underdeveloped food exports in BIN. Greater trade openness in South Asia can benefit both farmers and consumers and help agriculture in the region become environmentally more sustainable by permitting production to take place in regions most suited to it. Farmers benefit from trade through specialization, increase in efficiency and technology transfer and knowledge spillover while the consumers get access to a larger variety of better-quality food items available at more affordable prices.



## References

Biggs S. and Justice S. Rural and Agricultural Mechanization: A History of the Spread of Small Engines in Selected Asian Countries. IFPRI Discussion Paper No. 01443. International Food Policy Research Institute (IFPRI), Washington D.C., USA.

“Kathuria, Sanjay. 2018. A Glass Half Full: The Promise of Regional Trade in South Asia. South Asia Development Forum; Washington, DC: World Bank. © World Bank. <https://openknowledge.worldbank.org/handle/10986/30246> License: CC BY 3.0 IGO.”

Wacziarg, Romain and Welch, Karen Horn. "Trade Liberalization and Growth: New Evidence." World Bank Economic Review, 2008, 22(2), pp. 187-231; <https://doi.org/10.1093/wber/lhn007>.

The Asia Foundation. 2019. The Political Economy of Rice Trade Between Bangladesh, India and Nepal. <https://asiafoundation.org/wp-content/uploads/2019/01/The-Political-Economy-of-Rice-Trade-Between-Bangladesh-India-and-Nepal.pdf> (viewed on 15th June 2019).

United Nations. 2019. “UN Comtrade Database.” <https://comtrade.un.org/>.

## Foresight for Food Systems Status Reports

The Foresight for Food Systems in the Eastern Gangetic Plains (EGP) is a project led by IFPRI that seeks 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 engaging with other stakeholders like policy-makers, private investors, and farmers. A set of status reports on different components of the food system for better understanding of the current status, future challenges, research and knowledge gaps has been prepared for informed policy making for a sustainable future. The status reports will provide inputs into foresight and scenario building exercises in the region.

This work is funded by the Sustainable Development Investment Portfolio (SDIP), an Australian Government development strategy to increase water, food and energy security in South Asia to facilitate economic growth and improve livelihoods, targeting the poorest and most vulnerable, particularly women and girls.

SDIP initiatives aim to build technical capacity, share and generate knowledge, facilitate transboundary dialogue and mobilise the private sector and civil society in support of this objective. The focus area for SDIP initiatives is the three Himalayan river basins – the Indus, Ganges and Brahmaputra – which cover parts of India, Pakistan, Bhutan, Nepal and Bangladesh.

SDIP is a 12-year strategy (2012-2024), recognising that many of the critical interventions required for improving the integrated management of water, food and energy at the river basin level require sustained engagement to build regional cooperation and capacity over time. The Australian Centre for International Agricultural Research (ACIAR) is one of seven partners in SDIP. ACIAR SDIP funds research and development activities that improve agriculture's contribution to sustainable food systems. **For further information on the project please visit <https://aciarsdip.com/component-2>**