



Diversity and Implications of Food Safety and Quality Standards in Thailand and India

Summary

Although Thailand and India are two of the world's largest producers and exporters of fruits and vegetables, both countries suffer from severe food-safety and quality problems with its domestic and export-oriented produce. According to the United Nations Conference on Trade and Development, the two countries are consistently listed in the EU and US 2002–2010 agrifood rejections category, pointing to inadequate compliance – or lack thereof – with international standards, alluding to the low degree of implementation of good agricultural practices (GAP) nationwide. Both countries are aware that, in order to increase food safety and quality domestically and internationally, voluntary GAP standards are key. However, compliance is costly and can threaten the existence of small and poor farmers and value-chain operators in particular. Thus, standards and their implementation require careful consideration. However, among the host of food-safety and quality standards in existence, which ones are most relevant?

In this Briefing Paper, we distinguish between Level 1 GAP standards for high-value export markets and Level 2 local GAP standards for domestic markets and lower-value export markets. We provide an overview of the opportunities and challenges of implementing different levels of standards and use the “Five Rural Worlds” (5RWs) model of the Organisation for Economic Co-operation and Development (OECD) to demonstrate how standards impact and address the specific challenges of different types of agricultural producers. The primary findings of this analysis are as follows:

- Level 1 GAP standards, such as the collective pre-farm gate standard GlobalGAP, are the most challenging to

comply with and can only be adopted by a minority of producers belonging to RWs 1 and 2. Although voluntary, Level 1 standards, which are required by major supermarkets and retailers worldwide, are de facto becoming increasingly mandatory to supply high-value markets.

- Level 2 GAP standards are local voluntary standards (e.g. ThaiGAP, IndiaGAP) introduced with the aim of improving the level of food safety in domestic supply chains and to allow gradual upgrading to Level 1 standards. Level 2 standards are easier to comply with and could benefit the many traditional and subsistence agricultural households in RWs 2 and 3. In Thailand and India, parallel initiatives by the public and private sectors have led to two co-existing and overlapping local GAP standards.

Food safety will continue to remain an issue if GAP principles are not adopted on a large scale. Due to the complexity of standard requirements and the high costs of compliance, Level 1 standards are not an option for the majority of farmers in developing countries in the near future. Level 2 standards are more promising, but our case studies have shown that, if introduced by public actors, they tend to lack credibility due to a lack of capacity and resources. It is simply not possible for governments to certify millions of smallholders and to monitor continuous compliance as long as certification is not demanded and supported by the private sector. We encourage public and private actors to cooperate in harmonising standards and to jointly support smallholders in obtaining certification through institutional arrangements, extension programmes and media campaigns. Moreover, we recommend that governments focus on the implementation of GAP principles and improving quality infrastructure rather than focus on certification per se.

Standards in Thailand and India

Unsafe farming practices such as pesticide overuse, the use of untreated manure and poor hygiene practices are prevalent in many developing countries, resulting in health risks for the consumer and farmer, negative environmental impacts and a barrier for exports. To address the unresolved food safety problems, public and private actors promote and strengthen a diverse set of voluntary pre-farm gate standards for GAP that differ in terms of their level of difficulty, the markets that are served and in the way they are implemented. On the one hand, GAP standards contribute towards reducing food safety risks and are expected to lead to the upgrading of supply chains and facilitate access to new and more remunerative markets. On the other hand, they have been found to exclude small-scale farmers from high-value markets who often lack the capacities and financial resources to adopt standards.

This paper aims to provide an overview of the opportunities and challenges of a diverse set of voluntary GAP standards that are commonly implemented in developing countries. Taking the example of the fresh fruit and vegetable (F&V) sectors in Thailand and India, we apply the 5RW model of the OECD (2006) (see Brüntrup, 2016) to demonstrate the diverse impacts of standards and analyse how they address the specific challenges of different types of agricultural producers. The 5RW model breaks down the rural population into five stylised types of enterprises and households:

RW 1: large-scale commercial agricultural households and enterprises

RW 2: traditional landholders and enterprises, not internationally competitive

RW 3: subsistence agricultural households and micro-enterprises

RW 4: landless rural households and micro-enterprises

RW 5: chronically poor rural households, many no longer economically active

The 5RW model has the advantage of specifically considering the interaction of poverty-relevant groups (RWs 2 to 5) with potential actors in the growth process (RWs 1 and 2).

Classification of standards

Two broad categories of GAP standards that differ in terms of their levels of difficulty and coverage are commonly applied in developing countries. These are: **Level 1** GAP standards for the high-value export market, and **Level 2** local GAP standards for the high-value domestic market and export supply chain (see Figure 1).

Level 1 GAP standards are private, third-party standards applied by lead firms in the food chain to meet consumers' concerns over food safety, to differentiate products based on quality attributes, to mitigate commercial risks and to ensure compliance with public regulations. Although voluntary, they are becoming increasingly mandatory to supply high-value markets worldwide. One example is the collective standard GlobalGAP, which was introduced by European

retailers in 1997 with the aim of harmonising retailers' existing standards. GlobalGAP is a pre-farm gate standard that covers the process from farm inputs and all activities on the farm until the product leaves the farm. The main focus of the standard is on food safety, but it also covers aspects of environmental protection, workers' health, safety and welfare, and traceability. Besides GlobalGAP, there are several chain-specific GAP standards with similar requirements (e.g. Tesco Nature's Choice). Moreover, several national standards (e.g. ThaiGAP, IndGAP, KenyaGAP) have been developed with the aim of achieving benchmarking status, that is, being recognised as GlobalGAP equivalent.

Level 2 standards are basic voluntary GAP standards that are introduced by governments, private actors or as a public-private partnership. They aim to fulfil two objectives: to ensure food safety in the domestic market and to gradually upgrade food safety systems to facilitate exports and to allow adoption of Level 1 standards. Basic GAP standards under Level 2 are diverse: some are not as stringent, whereas others are more challenging to comply with.

Figure 1: Types and examples of GAP standards in developing countries

Level 1: Private GAP standards for the high-value export market

- Collective: GlobalGAP
- Chain-specific: Tesco Nature's Choice, Carrefour Quality Line
- National standards developed to achieve GlobalGAP benchmarking status (recognised as GlobalGAP equivalent): ThaiGAP, IndGAP

Level 2: Local GAP standards for the high-value domestic market and the export supply chain

- Standards owned by public actors (Q-GAP, Revised IndiaGAP)
- Standards owned by private actors (ThaiGAP Level 2, Basic IndGAP)

Source: Authors

Challenges and opportunities in Thailand and India

The two levels of standards identified above address different types of rural worlds and have their respective advantages and disadvantages. We draw on insights from Thailand and India to elaborate the diverse challenges and opportunities.

Level 1 – Private GAP standards for the high-value export market: Standards such as GlobalGAP are highly challenging to comply with and can only be adopted by a minority of producers in developing countries. In 2016, 188 F&V producers in Thailand and 8,006 F&V producers in India were GlobalGAP certified. These are very low numbers given that there are almost 6 million farms in Thailand and more than 120 million holdings in India.

Certified producers can be categorised as belonging to RWs 1 and 2. Studies from both countries on the factors influencing GlobalGAP adoption show that if farmers are supported by external actors in the adoption process, such

as a donor, an exporter or a marketing partner to a producer cooperative, land size is no longer the main determinant of adoption. Instead, adoption depends on farmers' human and organisational capacities. Small-scale farmers are, however, unlikely to adopt the standard without support and need external assistance at all stages of the adoption process: to obtain the relevant information, to decide on whether or not to adopt the standard and to implement the requirements at the farm level. Thus, while RW 2 – which, compared to RW 3, has higher capacities and better access to financing, information and inputs – can adopt the GlobalGAP standard with assistance from RW 1 and other actors, it is not an option for RW 3.

To facilitate compliance, Thailand and India started benchmarking their own national private standards to the GlobalGAP, named ThaiGAP and IndGAP respectively. The aim is to adapt the GlobalGAP standard to national circumstances and to make GlobalGAP compliance easier for smallholders. The ThaiGAP standard achieved benchmarking status in 2010, but benchmarking was not renewed for GlobalGAP version 5 due to a low demand for the standard. In fact, the number of GlobalGAP certificates in Thailand decreased from 809 in 2009 to 164 in 2016, reflecting challenges small-scale farmers experienced to remain in continuous compliance with GlobalGAP. IndGAP was only introduced in 2014 and is still in the benchmarking process.

The benefits of GlobalGAP adoption mainly occur outside developing countries. GlobalGAP-certified produce is exported, implying that consumers in developed countries benefit from GlobalGAP and not consumers in the “producing” developing country. At the producer level, studies show that farmers on average gain from certification. Such gains, however, largely depend on the amount of hectares certified due to high fixed costs associated with compliance (e.g. costs for certification, technical assistance, farm infrastructure and equipment). Moreover, benefits are not automatically passed on to small-scale farmers if a supporting exporter provides assistance to farmers to ensure compliance (Holzapfel & Wollni, 2014). Thus, benefits in terms of higher income from compliance mainly occur for RW 1 at best.

Level 2 – Local GAP standards for the high-value domestic market and export supply chains: Both the public and private sectors in Thailand and India have introduced local GAP standards for the high-value domestic markets and the export supply chain, resulting in two co-existing standards and confusion among producers and exporters. In Thailand, the government introduced the Q-GAP (now TAS) standard in 2004. Q-GAP is a requirement for export and has been used by domestic supermarkets to label produce as safe. The Thai Chamber of Commerce, starting in 2006, developed the private ThaiGAP standard with two levels: Level 1 (benchmarked with GlobalGAP) and Level 2 for the high-value domestic market. Similarly, in India there are two parallel standards: the government-owned IndiaGAP – initiated by the Bureau of Indian Standards in cooperation with the Agricultural and Processed Food Products Export

Development Authority in 2011 – and the IndGAP standard, introduced in 2014 by a (semi-) private actor, Quality Control India. Like ThaiGAP, both IndiaGAP and IndGAP have two levels: Level 1 for the high-value export market and Level 2 for the domestic market and to allow gradual upgrading to international standards.

Among the aims of the two public standards, Q-GAP/TAS and IndiaGAP are to facilitate exports and to improve food safety for domestic consumers. Lower-level GAP standards (Q-GAP/TAS and the revised IndiaGAP standard) are also applied to allow adoption by small-scale farmers in RWs 2 and 3 to get used to the domestic standards so that the transition of crop production practices towards GlobalGAP and other higher-level standards would be easier. Studies from both countries show, however, that there are serious deficits in implementing public GAP standards. In Thailand, there are several problems associated with the design and implementation of the Q-GAP/TAS standard, which lead to the low levels of adoption of the standard requirements among certified farmers, and ultimately to a lack of credibility. First, accreditation and certification are both in the hands of the Ministry of Agriculture and Cooperatives, which creates doubts about the credibility of the certification system. Second, overambitious targets to certify at least 145,000 farmers from 2004 to 2008 put too much pressure on the responsible government agencies, which lack the capacities to carry out appropriate training, or inspection and certification services. This has resulted in the farmers applying for Q-GAP receiving insufficient training and in lax audits and controls. A recent study has shown that Q-GAP-certified produce sold in Thai supermarkets exceeded European maximum residue limits in 57 per cent of the cases. Likewise, the implementation of IndiaGAP is weak. On the side of the government, lack of infrastructure and lack of personnel reduces capacity to implement the schemes. On the producer side, lack of access to information about standards in general – and on the certification process in particular – has hindered many farmers from getting certified.

Both IndGAP and ThaiGAP are a response by the private sector to the inadequacy of public GAP standards. To date, both standards still play a minor role in the high-value domestic supply chains. If successful and adopted by local supermarkets, their impacts can be expected to increase significantly over the next decade. The expected changes can be illustrated based on the example of Thailand.

The development of the ThaiGAP standard for the domestic market started in 2010 and was supported by major supermarket chains operating in Thailand, among them Makro, Tops Supermarket, Tesco Lotus and CP All Plc. Participating retailers aim to use the standard to ensure consumer safety and to differentiate their products. ThaiGAP Level 2 is a third-party standard based on GlobalGAP but only uses 167 instead of 234 control points and compliance criteria. Thus, it ensures a higher level of food safety than Q-GAP but is less challenging to comply with than GlobalGAP.

ThaiGAP is seen by its stakeholders as a tool for local producers to gain and maintain access to retailers and supermarkets. Yet, despite being more adapted to the local context, the standard mainly addresses RWs 1 and 2. To date, ThaiGAP is still being piloted and, at the end of 2015, the first 17 producers received a certificate. These producers cultivate between 8 and 32 hectares and were proposed by the supermarkets involved in the projects. Their farm size is much larger than the Thai average of 3.6 hectares. However, some smallholders were included in the certificates through contract farming arrangements. Hence, benefits of the standard can trickle down to RW 2 and potentially also RW 3.

The ThaiGAP standard, if successful, may have a huge impact on the F&V value chain in Thailand. Modern food retail outlets have been estimated to already capture above 50 per cent of the Thai food market in 2014. In case the ThaiGAP standard becomes a requirement, it can contribute towards significantly improving food safety in Thailand. On the other hand, however, resource-poor, small-scale farmers with limited human capacities and a lack of access to information and finance may lose access to high-value domestic supply chains.

Conclusions and recommendations

Donor programmes on food safety and quality over the past decade have mainly focussed on the GlobalGAP standard. The results of studies, however, show that even if access to donor support is available, it is the wealthier and more educated small-scale farmers who adopt the GlobalGAP standard, indicating that the poorest segment of smallholders has not benefited from donor interventions. In addition, the vast majority of smallholders serve domestic markets or lower-value export markets, where GlobalGAP is not a require-

ment. Due to the high and increasing market share of supermarkets, the introduction of GAP standards in the domestic supply chain can be expected to have a huge impact on producers. Although the standards applied to the domestic market are usually less stringent than GlobalGAP, they pose a similar threat and may lead to the loss of market access for small producers in RW 3, and potentially also in RW 2.

We found co-existing and overlapping local GAP standards (Level 2) initiated by public and private actors in both Thailand and India. Parallel standards lead to high transaction costs and confusion among producers and exporters. We therefore encourage public and private actors to harmonise existing GAP standards. The two public standards Q-GAP/TAS and IndiaGAP have been found to lack credibility because of a lack of resources and capacity to monitor compliance, and because both certification and accreditation are in the hands of the government. Hence, instead of aiming to certify as many smallholders as possible, governments are recommended to invest in upgrading the quality of the infrastructure as needed for standard adoption (in particular, metrology and accreditation) and in extension programmes and media campaigns that disseminate GAP on a larger scale. The widespread awareness and application of GAP principles is particularly important to improve the level of food safety for domestic consumers. Moreover, institutional arrangements that allow large numbers of small-scale farmers to adopt GAP standards should be supported. Here, lessons can be learnt from the example of GlobalGAP, in which RW 1 producers and enterprises support small-scale farmers in adopting standards. In addition, the support of service providers and producer cooperatives that offer access to financing and trainings to enable standard adoption by small-scale farmers is crucial.

References

- Brüntrup, M. (2016). *Revamping the OECD's Five Rural Worlds model for poverty-oriented inter-sectoral analysis, communication and planning* (Briefing Paper 16/2016). Bonn: German Development Institute/Deutsches Institut für Entwicklungspolitik (DIE).
- Holzapfel, S., & Wollni, M. (2014). Is GlobalGAP certification sustainable? Evidence from Thailand. *The Journal of Development Studies*, 50(5), 731-774.

This work is part of the research project "Promoting food security in rural sub-Saharan Africa" of the German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE) funded by the German Ministry for Economic Cooperation and Development (BMZ) under its "One World – No Hunger" (SEWOH) initiative.



Dr Aimée Hampel-Milagrosa
Researcher
Department "Sustainable Economic
and Social Development"
German Development Institute /
Deutsches Institut für Entwicklungspolitik (DIE)



Dr Sarah Holzapfel
Researcher
Department "Bi- and Multilateral
Development Cooperation"
German Development Institute /
Deutsches Institut für Entwicklungspolitik (DIE)