

Agricultural Sustainability in Bhutan: a Perspective

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The Situation

On 17 December, 2016, during the celebration of Bhutan's National Day, His Majesty The King gave a path-breaking speech on the priorities for the development of the country. The central part of the speech outlined the importance of reviving and developing agriculture as the traditional local economy in Bhutan.¹

Agriculture has been described as the “mother of all cultures”. While cultural development has lost its close ties to agriculture in many countries around the world, this old truth can still be seen and felt in Bhutan today - agriculture is without doubt the root and foundation of Bhutanese society. A majority of Bhutanese people across most dzongkhags are making their living by farming. Yet the nation's political focus, as well as the development of Bhutan's private sector, has not always reflected the importance that agriculture continues to hold for most Bhutanese. Hence a cross-sectoral effort to develop the future of farming in Bhutan is urgently required.

Rural-urban migration, which has been discussed extensively, is a global phenomenon. In Bhutan it is taking painful dimensions, leaving entire areas abandoned. If this trend continues, and farmers and their children leave Bhutan's rural areas at the current pace, more and more farmland currently under cultivation will become fallow, increasing the reliance on imports and worsening Bhutan's negative trade balance. Migration from the rural areas will also dilute Bhutan's unique culture which is in large parts embedded in the agrarian lifestyle. Unemployment related issues will continue to rise because neither the public service nor the private sector, in its current condition, can absorb the growing number of youth drawn to the cities.

It is worrying to observe that, even as fertile land becomes fallow, Bhutanese are seeking livelihoods overseas in both professional and non-professional jobs, in often unknown circumstances.

1 <http://www.kuenselonline.com/his-majestys-address-to-the-nation-109th-national-day-17-december-2016/>

A Fertile Ground for Sustainable Farming

The word sustainability comes from the Latin word *sustinere*, meaning to maintain or endure. How can farming be made sustainable in the current context? The trend cannot be allowed to continue the way it is going. Subsistence farming, which is an ultimately sustainable and independent way of life, does not offer conditions and opportunities that young people seek. Farming has to become economically viable as well as socially attractive so youth start to see a future in it.

Bhutan's natural environment as well as its global image are potentially ideal conditions for such developments. Just about every crop imaginable can be grown somewhere in Bhutan, from the highlands of the north to the mid-altitude belt, to the subtropical lowlands in the south. There are no limits: staples such as rice, wheat, maize, and potato; vegetables of any kind, spices and herbs, temperate and tropical fruits. The potential of the local market is often underestimated. Additionally, many places around the world could become lucrative markets for Bhutanese agricultural products. Bhutanese producers will not be able to compete in volume, but they can cater to the high-value niche markets of many countries, building on Bhutan's unique global image.

While government intervention and support can help pave the way, the core of this development has to be driven by the private sector. The government must step up its efforts to stimulate farming communities and especially ensure that enough financial resources are dedicated to this sector. However, companies and cooperatives that can create secured demand for farm products will be able to create a different dynamic, with profit as a direct incentive for innovation, investment and sustainability.

The Vegetable Market Scenario and Value Addition

The Bhutanese market is flooded with imported vegetables, most of which can be grown in Bhutan. The local market offers substantial opportunities for commercial farming,² with more Bhutanese consumers willing to pay a premium for local produce. This is true primarily for mid and high income groups but the trend is clear and increasing. However, it is not enough to service this growing market demand with increased production. Quality standards have to be developed and maintained and products must be delivered to market when required. Modern techniques such as greenhouses and improved post-harvest processes can play a vital role in catering to the market in a more targeted and efficient way. In addition, direct marketing

² Import of vegetable products amounted to Nu. 3,601,548,662, Bhutan Trade Statistics, 2014, Department of Revenues and Customs, Ministry of Finance, Royal Government of Bhutan, Page 3.

through the development of “farm brands”—in essence the establishment of a reputation of quality for certain communities, areas, or individual farms for the crops that are cultivated there - could help secure direct market access and create a lasting relationship between farmers and consumers.

If this first phase of local market development is achieved, it will be much easier to expand and scale production to export to outside markets for greater value creation. Other huge opportunities lie in the field of processing and value-addition of agricultural produce. Processing offers an instant gateway for entrepreneurs into the sector, allowing them to connect to farming communities, drive agricultural development, and directly impact the livelihoods of farmers. A glance at the annual import statistics and the significant imports of almost every food consumer goods into Bhutan, shows the vast opportunities provided by the local market.³ On top of that, high-quality branded products from Bhutan would do very well in many developed markets around the world if they can authentically live up to the image that Bhutan enjoys. The prerequisites in Bhutan provide the opportunity for manufacturers to develop products based on indigenous wisdom and strive to incorporate the philosophy of GNH into their undertakings.

One important premise is that the value-chains of products are developed and labelled in a transparent and credible way. Manufacturers are free to decide if they want to make the effort to build the company’s production on local raw-material sources or not. This requires extra effort and investment. Companies willing to go this extra mile should be rewarded with exclusive permission to brand their products accordingly. The government should set very clear standards on how products are allowed to be labelled based on the origin of raw materials. While transparent and trustworthy labels are a foundation to an internationally recognised “Brand Bhutan” image, these systems are currently not in place.

The Potential of Cooperatives

While the cooperative movement is still in an early stage in Bhutan, cooperatives can play a significant role in the genesis of a private sector which is progressively founded on strong social values and the creation and distribution of common goods. Traditional cooperative models are focusing on representation of farmers’ interests. Key actions are pooling and organising farmers, sharing resources and machines, as well as access to markets and protection from discrimination in the market place.

³ Import of processed food from cereals and vegetables amounted to Nu. 1,085,873,159 in 2014, Bhutan Trade Statistics, 2014, Department of Revenues and Customs, Ministry of Finance, Royal Government of Bhutan, Page 3.

The public perception of cooperatives is still very much dominated by this traditional approach. However, cooperatives can become more than that – an alternative approach to business, providing a common platform and ownership to all important stakeholders along the value-chain. The legal framework for cooperatives in Bhutan considers and promotes the multidimensional nature that cooperatives can have. Like capital businesses, cooperatives can act in many different ways and across multiple sectors, from production, processing, and marketing in different industries to the service, education, and finance sectors.⁴

There are several challenges in Bhutan in developing a progressive cooperative approach. For one, there is a likelihood of misalignment between shareholders and stakeholders. Many farmers are not able to read and write or understand complex business set-ups and transactions, which they become a part of in a progressive cooperative business approach. This can be addressed by representation of educated and trusted farmers in the decision making bodies and by organising different levels of management, from the farm level to the core body, developing business strategies. On the other hand, the government needs to get clarity on the framework and conditions for entrepreneurially driven cooperatives. The general responsibility for cooperatives lies with the Ministry of Agriculture, while many competencies for business activities that cooperatives may undertake, lie with the Ministry of Economic Affairs. A close exchange and cooperation between the concerned agencies is required to set the ground for a dynamic development of the cooperative sector. Furthermore, it could be helpful to organise a platform for exchange of ideas and experiences among the different stakeholders.

Government Intervention

Last year's "chilli crisis" is an example of the impact that government intervention can have on the local market and on the agricultural sector. Government agencies banned the import of chilli from certain areas of West Bengal in India because of the high pesticide contamination detected in the chillies. The consequences of the price increase were quite severe for consumers, especially for consumers with a lower income. However, such a situation offers a huge opportunity for local farmers to increase their production. The immediate reaction can already be seen in the chilli growing communities around the country and it can be expected that increased production will lead to reduced prices and possibly benefit the country as a whole in the long-run by reducing reliance on imports of a crop that is central to the national diet. The chilli crisis is a unique situation, but carefully planned government

4 Article 8, The Cooperative (Amendment) Act of Bhutan, 2009.

intervention could positively impact the agricultural development in other cases and areas – at least as long as Bhutan has not joined the World Trade Organisation.⁵

To get more clarity on priorities and strategies into the future, the Government needs to develop a holistic agricultural policy, defining short-term goals and focus areas while determining a long-term national vision for the development of the three involved sectors of agriculture, livestock, and forestry.

Changing the Mindset

The greatest change required is a change of mindset. The perception of agriculture in Bhutan, especially among the youth, needs to change drastically. Today, farming is mostly seen as a part of a lifestyle of the past. It is not understood that commercial agriculture offers a professional career, requiring finance skills and management, organisation of logistics and marketing. Many young Bhutanese do not understand that farms can be highly profitable businesses. There needs to be a shift from agriculture being seen as a traditional sector mired in poverty to a potentially lucrative and creative sector. However, such awareness and initiatives will not originate from the farming communities. They will require the engagement of educated and smart young people with the knowledge to drive innovation, creativity, and economic progress. Some pioneers, willing to take the “risk of being the first”, are starting on this journey. If they can showcase success, many will follow in their footsteps.

Inspired by His Majesty the King’s Royal Advice last December, and a reminder to the financial institutions in a recent audience, a push is going through the entire sector and beyond. Banks and the Royal Monetary Authority have agreed to substantially increase lending, at decreased interest rates, to agricultural projects as a priority sector.⁶ Several initiatives have been started by the government to bring youth into agriculture and place fallow land under cultivation. Now entrepreneurs, established businesses, and cooperatives have to take up the opportunities that are being provided to help create a flourishing environment for the development of agriculture in Bhutan.

Agriculture and the Sustainable Development Goals

This issue of the Druk Journal is focusing on the Sustainability and the Sustainable Development Goals (SDGs) which has been signed formally by Bhutan alongside

5 Bhutan’s Quadrilemma: To Join or Not To Join the WTO, That is the Question, Mark Mancall in: Gross National Happiness and Development, Page 260, Centre for Bhutan Studies and GNH.

6 <http://thebhutanese.bt/rma-and-banks-agree-to-prioritize-lending-for-agricultural-projects/>

192 other countries. With the signing of the SDG's, Bhutan has taken on the responsibility to align the 12th Five Year Plan and the country's broader vision of GNH with the SDG's.

The central SDG for sustainability in agriculture is Goal 2, summarised as following: "End hunger, achieve food security and improve nutrition and promote sustainable agriculture."

Each goal is substantiated through several targets with timelines and associated indicators.

The Targets of SDG 2

The first two targets of SDG 2 are proposing to end hunger and all forms of malnutrition, especially among children.⁷ Despite the substantial growth of Bhutan's economy in recent years, one-third of the population, especially in remote rural areas, still suffers from food insecurity. More than a third of children in Bhutan show signs of stunted growth caused by chronic malnutrition and six percent of children are underweight, a condition known as wasting, which is caused by acute malnutrition.⁸ The World Food Programme (WFP) has been providing meals to most of Bhutan's children through a school-feeding programme, which is currently phasing out. The government is taking over and has developed a roadmap for the new "National School Meals Programme".⁹ But the government's efforts have to be accompanied by civic engagement to end hunger and malnutrition in Bhutan by 2030. With a well-designed initiative, the schools in the country can become viable partners to farming communities which can provide nutritious food and, at the same time, build their efforts on secured markets. Again, this will require engagement of educated farm entrepreneurs that can drive these efforts and coordinate government support.

The third target is to double the agricultural productivity and incomes of small-scale farmers by 2030, as well as to ensure access to land and other productive resources, inputs, knowledge, financial services, and markets.¹⁰ Given the difficult terrain in Bhutan, the increasing shortage of labour, and the devastating effects of wildlife conflict, this target will be one of the most challenging objectives for Bhutan.

7 Target 2.1 and 2.2, Sustainable Development Goal 2

8 <http://www1.wfp.org/countries/bhutan>

9 <https://www.wfp.org/news/news-release/wfp-commends-bhutan-roadmap-national-school-meals-programme>

10 Target 2.3, Sustainable Development Goal 2

One question unique to Bhutan would be how to achieve both the targets of doubling the country's agricultural productivity while also becoming a fully organic country by 2020. Organic agriculture has been developed as an answer to the industrialised and, in many cases, environmentally devastating route that farming has taken in many parts of the world since the beginning of the 20th century. Organic agriculture generally promotes systems that are built on ecosystem management rather than external chemical inputs. Countless certification schemes exist in different countries—most of them in places with agricultural practices that rely heavily on input of chemicals to increase soil fertility and fight different kinds of pests and diseases. The market demand for organically certified produce is on the rise in many places, even though much of today's organic agriculture relies heavily on subsidies.

The challenge for Bhutan in achieving the “fully organic” goal has been to combine organic certification with the daily reality of small holding farmers. With the rural-urban migration trend, the shortage of labour for manually intense farming work is becoming more acute. Bhutan's mountainous terrain makes it difficult to mechanise farming practices. On top of that, a stable market for organic product has not been established in Bhutan.

Certification systems usually do not look at the social conditions in which the farmers are living. In Bhutan, the Government has developed several tools such as the National Organic Standard and the Bhutan Organic Certification System, which are designed as “zero cost models” for farmers,¹¹ to align the realities of Bhutan's small-holders with the national goal to become fully organic. Yet it has become evident by now that it will be very difficult to achieve this goal in the near future.

Bhutan and its policy makers have a choice to make between the dictates of the SDG target to double agricultural productivity and that of going 100 percent organic. Despite the progress of methods to intensify organic growing systems it is likely that this is an irreconcilable choice. Acting as though it doesn't exist will simply prolong the inevitable and presumably achieve neither.

The convenience of agriculture driven by chemical inputs is that farmers can simply follow a roadmap and apply chemicals where specified “by the book.” The knowledge in this form of agriculture has been created and sheltered in the labs of multi-national agro-companies, bringing farmers into lasting dependence. Bhutanese farmers must not get trapped in this cycle. In recent years a new method of agriculture is emerging, in many cases driven by organic pioneers, based on a deeper scientific understanding

11 Zero-cost Organic Certification System: A Beginning, Dr. Thimmaiah

of natural systems that allow crops to prosper. For example, potato farmers in Bhutan have seen a steady decline in harvest over the past decade. The farmers' only response to deal with this painful situation has been to add more fertiliser every year, which does not result in the desired yield increase. It is likely that a variety of reasons are causing the decline in output, among them being degeneration of seeds, virus infection, irrigation management, and use of varieties that are vulnerable to certain diseases. None of these issues can be solved by additional chemical input. Thorough research is required and knowledge has to be built up to understand the causes and develop strategies that can resolve these problem at the source. On the other hand, not using any inputs to treat the versatile problems resulting from the unattended root causes, will lead to devastating loss of yield in a crop that is central to the livelihood of many farmers in Bhutan.

The solution towards achieving the SDG's target of doubling the productivity, while protecting Bhutan's unique environment from ground water pollution, air pollution, and soil degeneration, is a knowledge-based approach to agriculture. The route could be to keep the "organic vision" in mind and reduce the use of chemical inputs as much as possible by building knowledge and developing best practice, but not denying farmers access to controlled levels of agricultural input which they require at this point in time to make ends meet.¹²

Decisions have to be made with great care and vision, considering that agriculture is a crucial and critical sector for Bhutan's pursuit of Gross National Happiness and the attempt to find a balance between spiritualism and materialism. An approach allowing access to Bhutan's vulnerable farming communities for ventures only driven by profit maximisation and capitalising on environmentally harmful agricultural practices, can do irreversible damage.

In summary, many challenges lie ahead for the sustainable development of agriculture in Bhutan.¹³ On the other hand, there are equally great opportunities for sustainable farming models and vibrant processing businesses which have the potential to become the basis of a strong private sector in Bhutan.

12 The "Bhutan Good Agricultural Practice" Standard, which has been endorsed by the Government, is helping to make sure levels of input are kept at the necessary minimum.

13 There are several additional targets under SDG 2, which the authors have not considered for this article.