

FDI Feature Interview

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Peter Batt: The State of Food and Agriculture, Part 2

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Key Points

- Climate change will severely impact global food production and security.
- Fundamental and wide-scale change will be needed across the entire food chain, in order to be able to meet the population's demand for healthy and nutritious food.
- Agroecology draws upon farmer's local knowledge and experience to create solutions to lower production costs and increase food outputs, while considering natural resource use, reducing negative environmental impacts and improvements in water quality and maintaining ecosystems.
- Poverty and malnutrition are becoming more common in some urban settings, partially because of a shift in the distribution of people from rural to urban areas.

Introduction

In Part 1 of this Feature Interview, Peter Batt, an independent contractor for the United Nations Food and Agriculture Organisation (FAO), outlined the wide range of factors affecting and influencing the global food situation and how countries, governments and societies need to change strategy to ensure a better future.

In Part 2 Peter highlights the importance of food security for the world's future. He emphasises that responsibility will fall on governments, industry, society and the community and will include support and encouragement for farmers; managing our water and natural resources; addressing food waste; design and implementation of effective food distribution networks; and ensuring all people of the world are able to access safe, healthy and nutritious food.

Interview

FDI – How would you describe the global food situation and what challenges do governments, researchers and society face with a growing population and lessening food security?

Peter Batt – At the 1996 World Food Summit, food security was said to exist ‘when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life’. The definition encompassed four dimensions:

- availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports
- access by individuals to adequate resources for acquiring appropriate foods for a nutritious diet
- use of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met
- access to food, regardless of sudden shocks or cyclical events.

Food is both a fundamental need and a right. This is realised when every man, woman and child, alone or in a community with others, has the physical and economic access at all times to adequate food or, the means for its procurement. Food is also a commodity, a product, a meal, a source of nutrition and it is [fundamentally linked to questions of culture, heritage and identity](#). At every stage along the food value chain, input suppliers, farmers, food processors and manufacturers, buyers, distributors, regulators and consumers, each play a role in shaping its safety, quality and its environmental footprint.

[Food is the common issue](#) linking all 17 of the [UN Sustainable Development Goals \(SDGs\)](#). Without eliminating hunger and improving the health and nutrition of the world’s population, the 2030 Agenda for Sustainable Development cannot be realised. Furthermore, without a revolutionary change to our current farming systems, it will not be possible to achieve the [Paris Agreement](#) of limiting global warming to below 2° Celsius.

To provide safe, healthy, nutritious food in sufficient quantity to feed an anticipated population of 9.8 billion, productivity will need to increase by some [50 percent](#). To feed the world in a sustainable way, however, means meeting the rising demand without putting [additional pressure](#) on the planet’s natural resources. Fortunately, significant improvements in food security, as well as greater resilience to climate change, can be achieved with the [introduction of sustainable agricultural practices](#).

Smallholder farmers often have limited access to the technical knowledge and required skills, and lack the financial resources to invest in higher production (irrigation, fertiliser, machinery and crop-protection products), or the crop and livestock varieties to maximize yields. Furthermore, they seldom have the capacity to store their produce after harvest or to

access the infrastructure necessary to transport their produce to markets. Other farmers may choose not to invest in improving agricultural productivity because of the high costs of inputs or the low returns often associated with increased production. Where the risks of investment are high, and there are no means by which to offset that risk, to not invest can be the most rational economic decision.



Figure 1: Smallholder farmers must be supported in order to increase their food production.
Source: Kath Clark/USC Canada

A farmer's income and productivity will be boosted by adopting practices such as using more nitrogen-efficient and heat-tolerant crop varieties, zero-tillage and integrated soil management. Increasing soil organic carbon will improve crop yields, help to build resilience to drought and flooding and will increase carbon sequestration. Other climate-smart farming practices include modifying planting times, changing the mix of crops and livestock, integrating climate data into cropping decisions and expanding the use of irrigation.

Globally, as the demand for water increases, availability is rapidly becoming a key limiting constraint. In irrigated agricultural systems, water use efficiency can be promoted through the use of irrigation technologies, such as drip emitters and better maintenance of irrigation infrastructure, combined with appropriate training to build farmers' technical knowledge. In dryland farming systems, better management of rainwater and soil moisture is the key to raising productivity and reducing yield losses.

The food a household consumes is [influenced](#) by nutritional factors, preferences and cultural practices and ease of access. Market prices and advertising are also key factors. Governments, industry and society must renew efforts to restrict the advertising and marketing of unhealthy, unsustainable foods, and must simultaneously support healthy diets

from sustainable food systems. Education about healthy diets should be integrated into schools and social programmes and relevant national bodies should implement guidelines that are supported by enabling policies and incentives. These must be reflected in public procurement policies. Physicians and health-care professionals can engage with food service industries to redesign public food provisions and to advise and assist food service industries to make the transition. Local authorities will require powers to enable zoning regulations to restrict unhealthy food outlets and, in low-income countries, to ensure adequate infrastructure. This will serve to facilitate access to suppliers of healthy and nutritious food, reduce food prices and volatility and food losses. Costs to social health and the environment arising from the consumption of poor-quality food should be fully reflected by introducing tax measures. As a result, food prices may increase and, therefore, where appropriate, social protection or safety nets will need to be established to protect vulnerable populations.



*Figure 2: Agroecology principles apply across all levels of farming practice.
Source: FAO.*

In an [equitable food system](#), when all people have access to a sufficient quantity of safe, healthy, nutritious and affordable food – they are food secure. Households that are food secure are better able to cope with fluctuations in food security or shocks due to natural or manmade disasters. By strengthening income security and investing in rural livelihoods, social protection can also help improve agricultural productivity, stimulate local economic development, build resilience, encourage sustainable natural resource use and promote social inclusion. With the urban poor spending 80-90 per cent of their household income on food, when food prices rise, consumers often shift from more expensive and more nutritious foodstuffs to less expensive, but often less nutritious foods. While this allows consumers to maintain their dietary energy intake, it heightens the [risk of other forms of malnutrition](#).

With increasing urbanisation - from urban migration and population increase - the focus on food insecurity and malnutrition is shifting from a rural to an urban problem. Today, more than one billion people live in informal, and low income settlements, where [diets](#) are often deficient in calories, diversity and nutrients. Furthermore, food insecurity, often considered a problem specific to the developing nations or low income households, also exists within [higher income households](#) where chronic health conditions, unemployment, or excessive spending on gambling, alcohol, tobacco or substance abuse can create financial instability and put pressure on food budgets. Residing in rental accommodation has also been found to have a positive association with food insecurity, with divorced and separated people especially at risk because of the division of household income.

Promoting a [local food culture](#) places greater intrinsic value on regional foods where people derive enjoyment from cooking, eating and sharing food. This creates greater social cohesion: a sense of place and greater solidarity with food producers. [Gastronomy](#) – the art of choosing, cooking and eating good food – is increasingly recognised for its potential in addressing global challenges. A strong policy focus on food identity – the social and cultural side of food – can also reinforce economic and environmental sustainability, and even help target poor food habits like food waste. Gastronomy and strengthening food culture also present unique opportunities for local and regional branding leading to rural development and tourism; the development of farmer’s markets, urban gardening, organic food, composting and greater environmental awareness.



Figure 1: Local, smallholder farmers need to be able to market the food they produce.
 Source: Burlinson Institute.

Efficient [distribution systems](#) and connecting farmers to markets through infrastructure are a key factor in determining a population's access to safe and affordable food products. Environmentally efficient, reliable and affordable transport systems are required to move people in support of sustainable economic growth, improve the social welfare of people and enhance regional and international co-operation and trade. In countries where the farm structure and the marketing systems are under-developed, wholesale markets are needed so that smallholder farmers can market and sell their produce. Furthermore, appropriately located and managed wholesale markets are basic instruments in promoting competition, improving public health and food quality control.

Approximately one third of all food produced is lost or wasted; reducing loss and waste will improve the efficiency of food systems and will reduce the pressure on natural resources and greenhouse gas emissions. Regrettably, consumers are encouraged to waste food because it is cheap. Furthermore, consumers have become accustomed to purchasing foods of the highest cosmetic standards, hence, retailers then discard many edible yet only slightly blemished products. Commercial pressures also encourage food waste: marketing "super-sized" portions or "buy one, get one free" offers. Furthermore, litigation and lack of education on food safety has led to a reliance on "use by" dates, whose safety margins often mean that food fit for consumption is thrown away. Globally governments and municipalities must invest in alternative ways to deal with food waste.

In developing economies, the majority of food losses occur due to managerial and technical limitations such as a lack of storage facilities, cold chain, proper food handling practices, infrastructure, packaging, or efficient marketing systems. Appropriate solutions must first and foremost take a producer's perspective by improving harvest techniques, educating farmers and improving storage facilities and cool chains.

On 1 January 2016, the SDGs under the *2030 Agenda for Sustainable Development* came into force; there are 17 goals that seek to mobilise efforts to end all forms of poverty, fight inequalities and to tackle climate change, while ensuring that no one is left behind. The SDGs recognise that ending poverty must go hand-in-hand with strategies that build economic growth and address a range of social needs including education, health, social protection and job opportunities, while tackling climate change and environmental degradation. All SDGs have targets that directly or indirectly relate to the work of local and regional governments. Local governments, however, as the policy makers and catalysts of change must integrate food within the economic, social and environmental dimensions of urban planning.

About the interviewee:

Peter Batt is principal of Peter J Batt and Associates, an international agribusiness marketing and rural development consulting group. Clients to date include the Food and Agriculture Organization of the United Nations, World Bank, the Technical Centre for Agricultural and Rural Cooperation, the Australian Centre for International Agricultural Research (ACIAR) and the Australian Export Grain Innovation Centre (AEGIC). With over thirty years of experience, primarily in Asia, we link smallholder farmers to markets, facilitate the establishment of collaborative marketing groups, implement quality management systems and identify market opportunities for a broad range of agribusiness products in high value markets. With a solid foundation in value chain research and specialist skills in building enduring long-term relationships, we seek outcomes that are sustainable, equitable and profitable.

Any opinions or views expressed in this paper are those of the individual interviewee, unless stated to be those of Future Directions International.

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