



# Local foods

**Increased transparency on food availability and security, land use and eco-literacy accelerate mass consumption of locally grown and processed foods.**

After nearly a century of interest in global foods sourced from different countries, some developed-world nations have seen a steadily growing middle-class focus on returning to locally produced foods: the organic movement, seasonal produce and 'locavores' are all now on the food industry radar. Across the globe, in the various workshops and discussions undertaken as part of the Future Agenda programme, we can see an alignment of multiple drivers of change around food, from GM crops and improved irrigation through to concerns about national food security and an increase in urban farming. Together these are leading many towards a global solution to food supply that is increasingly focused on the local. Although the approaches differ from region to region and state to state, it appears that the world of 2020 will be one in which more people are better fed through more intelligent use of resources.

Starting with the areas where there is not enough food to feed the local population, we can see that in recent years several factors have combined to make things worse – from imbalanced population growth to poor water management and the impact of global trading on the price of commodities. However, as one workshop participant highlighted, 'there is no such thing as a world food shortage; it is a supply and distribution problem and we therefore need to be better at managing this'.

Alongside better management of supply chains and more intelligent transportation of excess foods in some markets to areas of need, people point to major technological advances being made by some of the world's agribusinesses. For example, Monsanto and BASF have been working on drought-tolerant corn with modified genes. These and similar developments by other companies use new technologies to 'deliver yield improvements under water-stressed conditions'. Over the next decade they are destined to play an important role in the food supplies of Africa, India and parts of Asia as well as parts of the US and Europe as water stress increases. These crops can be grown locally, close to the population and so reduce dependency on long-distance aid and trade. As Jim Kirkwood highlighted in the initial perspective on the future of food, 'we need to significantly increase global research investment in biotechnology, genetics, food science and nutrition to reach the technical breakthroughs required for a second agricultural green revolution that will enable us to feed the world'.

For countries with enough food today, a rising future concern is that of food security and being able to guarantee adequate supply to feed growing populations in resource-constrained times. Especially as diets change and increasing numbers of us consume more meat, the knock-on effects on other foods as well as on water and farming mean that in many parts of the world there will be conflicting

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pressures around land use. Add in the possibility of 'peak fish' and 'peak grain' to go along with 'peak oil' and the continued impact of the growth in bio-fuels over the next few years, and even countries that are currently over-supplied with food will have to plan more carefully in the future. Whether it is food vs. fuel competition for land or simply more people consuming more, constraints on food supply are imminent. The World Summit on Food Security, organised by the Food and Agriculture Organisation of the United Nations (FAO) in Rome in 2009, highlighted that 'the global food security situation has worsened and continues to represent a serious threat'. At a national level, in India in 2008 the Ministry of Agriculture published a National Food Security Mission which included a plan to 'increase the production of rice by 10 million tonnes, wheat by 8 million tonnes and pulses by 2 million tonnes by the end of the Eleventh Plan in 2012'. In 2010, the UK announced a national food strategy, calling for a British farming 'revolution', with Hilary Benn, the then Environment Secretary, saying that: 'We need to produce more food. We need to do it sustainably. And we need to make sure that what we eat safeguards our health.' Across the world, countries are taking the food security issue very seriously and the goal of increasing the amount of locally produced food is a key component.

We also have the opportunity to develop more efficient farming methods. While organic food and the like is a suitable ideal for our gardens and the outlets serving wealthy consumers, some people assert that it cannot be a role model for feeding the mass population. Large-scale farming to feed the world's millions requires more refined crops and this implicitly means wider acceptance of GMO. Several workshop participants saw that, by 2020, GM crops will be accepted globally and that regulatory bodies such as the EU will have significantly loosened restrictions on them.

Another commonly agreed view is that we will see a rise in the number and size of urban farms. Both from a desire to keep some food production and processing as close to the market as possible and from the opportunity to make better use of our urban green spaces and roofs, many see urban farming taking off. At one level this will be encouraged by city planners and mayors keen to ensure local food security. According to Arup's Foresight team, 'half of Shanghai's pork and poultry, 60% of its vegetables and 90% of its milk and eggs come from the city and its outskirts'. Elsewhere in Asia, 80% of Hanoi's fresh vegetables come from farms within and around the city. In the developing world, local food supply has been a key concern for years and will continue to be a priority in the coming decade. In Europe and the US, however, there has been a shift to importing foods from half way around the world – lamb from New Zealand, asparagus from Kenya, kiwi fruits from Chile and so on.

But, with food security becoming a bigger issue, we can expect to see more urban farming occurring in the West. In cities where there are brown-field sites, people are already starting to use land for farming

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rather than housing. Detroit is the prime example here: 'The amount of vacant and abandoned land in Detroit would roughly add up to the size of the city of San Francisco' and so, with urban land cheaper than arable land, John Hantz and his colleagues are leading programmes to grow fruits and vegetables for local consumption. Elsewhere, where land is more valuable, there are plans to make more use of flat roofs for agriculture and introduce vertical urban farms. From New York and London to Mexico City, highly efficient multi-storey vertical farms incorporating hydroponics and aeroponics are destined to become a common feature. One team in the Royal College of Art project conducted as part of the Future Agenda programme focused its attention on how innovative, sustainable building systems in unplanned ghettos of fast-growing cities could be used to provide vertical walls for growing crops for both home consumption and sale. Around the world, people and governments are starting to shift urban farming up the list of priorities to a point where it will have a significant impact on parts of the food system.

Lastly, we also have the increasing influence of the environmental and sustainable viewpoints. While workshop participants felt that 2020 is too soon for such developments as personal eco-footprints to take hold and drive consumer choice, several did feel that wider eco-literacy over the next decade will help people to explore alternative food options more intelligently. This will not just be simply about choosing not to eat products from certain locations as a consequence of 'food-miles', because the CO<sub>2</sub> savings of growing produce in greenhouses as opposed to air freighting them are sometimes marginal. Rather, it will be consumers choosing to consume more local, seasonal food; retailers choosing to steer choice by labelling and product selection, so 'nudging' their customers towards locally supplied and processed products; and more of us generally becoming aware of the overall environmental footprints of certain foods – in terms of water, waste and energy.

By itself, the eco-friendly view will take a long time to significantly shift the mainstream but, taken in conjunction with the other developments in food security, national food strategies, technology and commercial choices for food manufacturers and retailers, many see a world in 2020 where local foods will again become the global norm.



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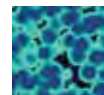
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