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Delivering results policies and practices for change

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Abstract



On 25 September 2015, the 193 members of the United Nations General Assembly unanimously agreed to 'End Hunger' by 2030 through their agreement on the 2030 Agenda on Sustainable Development. Under Sustainable Development Goal (SDG) 2, the world's leaders agreed not only to 'End Hunger', but to 'Achieve Food Security and Improved Nutrition, and Promote Sustainable Agriculture' — an extraordinarily ambitious agenda of eight targets and 14 indicators encompassing hunger,

agriculture, environment, nutrition, trade and investment. Approaching three years into the 2030 Agenda, an impressively large number of governments, international agencies, NGOs, businesses and universities have embraced SDG 2, along with several other complementary SDGs, as a framework for action towards achieving a healthier and more sustainable global food system. However, delivering results through policies and programs is proving more challenging. In presenting their Voluntary National Reviews to the United Nations, most countries have reported on their aspirational plans and good intent. Results at scale are few and far between. In this overview, I will draw on personal experience from four countries (Cambodia, Malawi, Timor-Leste and Tajikistan) to identify strategic operational and design lessons that can inform a more effective response to SDG 2. My conclusion is that SDG 2 is by and large achievable but more likely by 2040 or 2050, rather than 2030. Across all targets, we have the knowledge and the financial resources to enable an unprecedented positive transformation of our global food system. All that is required is genuine, sustained political commitment and creative implementation strategies.

Let me start at 25 September 2015 at the United Nations: the approval of the Sustainable Development Goals (SDGs)*, the new development agenda unanimously approved by 193 countries, with much cheering and clapping and backslapping, mostly by men in blue suits.

Image: UN Summit adopts 2030 Agenda for Sustainable Development.



(Credit: UN Photo/Cia Pak.)

^{*} http://enb.iisd.org/post2015/summit/enb/25sep.html

This paper has been prepared from a transcript and the illustrative slides of the presentation.



Figure 1. SDG 2 compared to MDG 1.

MDG Target 1.C was: Halve, between 1990 and 2015, the proportion of people who suffer from hunger. (*Top image by Glenn Denning, in Tajikistan. Lower image: United Nations.*)

To achieve SDG 2 and others, however, first we have to learn how. For the agriculture and food area, it requires a fairly major change to move from the Millennium Development Goals to the Sustainable Development Goals. For the years 2000 to 2015 the corresponding goal (MDG 1) was simpler: to reduce by 50% the proportion of people who are hungry. Goal 2 of the SDGs is much more complex: not only reducing hunger but ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture (Figure 1).

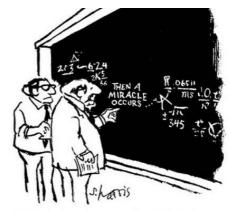
Goal 2 is also linked to many of the other SDGs. It has eight targets (Figure 2) and 14 indicators, also to be achieved by 2030: ending hunger, ending all forms of malnutrition, doubling agricultural productivity and incomes, and so on, right across to infrastructure, research, trade, and marketing. Goal 2 has a much bolder, more ambitious, far-reaching and comprehensive agenda than has ever been adopted in the past by all countries of the UN.



Figure 2.

As everybody left New York on the Saturday after the approval of the SDGs, the question was: What do we do next? Some kind of miracle would occur, and all those wonderful targets would be achieved by 2030. What I aim to do here now, very briefly, is to be a little more explicit on how we might move to that level.

The first thing, however (and much of this has been discussed at this conference already), is what exactly do we want? It's always good to define that.



"I think you should be more explicit here in step two."

Image credit: Sidney Harris.

I think there will be no

disagreement that we're looking for a food system that will end chronic and acute hunger for all; that provides good nutrition and supports good health for all; that is 'good' for the environment, both short- and long-term, and is good for farmers as well; and that is a climate-smart food system and resilient to shocks. In short, it is a **productive, inclusive, healthy, sustainable and resilient food system**. That is the goal we are trying to achieve.

How do we get there?

Figure 3 summarises the components of a model for how we can reach this goal. Around the outside are some of the aims discussed this morning, and at the centre is this food system that we all aspire to. It is essentially SDG 2++ in simpler words. I argue that to achieve the six components (the outer hexagons)



Figure 3. Delivering results: An integrated multi-dimensional framework for investment. A productive, inclusive, healthy, sustainable & resilient food system.

requires additional intensified investment. Therefore, this is really a framework for investment of human resources and financial resources.

Sustainable intensification

In the Sir John Crawford Memorial Address and this morning we heard about the first phase of the Green Revolution, increasing calories, the 'Big 3'— wheat, rice and corn. Green Revolution 2.0 arguably came 15 or 20 years later, moving more into marginal environments, and also into rain-fed agriculture with greater sensitivity to the environment, integrated pest management and the like. 'Sustainable intensification' (top hexagon in Figure 3) is the third stage. It has a few characteristics I want to emphasise.

- First: no net land area expansion; we may even need to contract the areas planted to agriculture, and in many parts of the world we should. That implies that we still have to increase productivity I think we should be very very cautious about dismissing productivity and production increases as being unnecessary. I come back to that below.
- Second: sustainable intensification harnesses modern science and technologies, areas that Andrew Campbell mentioned this morning – GM technology, gene-editing, precision farming, use of ICTs and others.
- We also need to improve input-use-efficiency, with more efficient use of water, of nutrients, of energy. This is the area of precision farming.
- Climate smart: that is, agricultural systems, intensified systems that are not only productive but are adapted to a changing climate, and are also contributing to mitigation of climate change.
- Fifth: I agree totally with the previous speakers today: agriculture needs to move beyond the Big 3, even beyond cereals, and look at nutrient-dense commodities like legumes, like vegetables and certainly livestock and animal products, particularly from poultry and small ruminants.

Market connectivity

Next around the outside of Figure 3 is 'market connectivity'. We need to connect areas of intensive agriculture to the markets and the consumers, by enhancing value chains. It will require investment in hard infrastructure such as roads and rail and ports, ICT and electrification. Also, investment in the soft infrastructure – the policies, the capacity-building that enables us to enhance these value chains. We are seeing more of that being picked up now by the international development banks: the Asian Development Bank, the African Development Bank, the World Bank, and so on. Clearly, enhanced market connectivity is complementary to – and indeed necessary for – sustainable intensification.

Post-harvest stewardship

What is the point of producing all this food if we lose it at the farm level or in transport or processing (loss of quantity or nutritional quality – unintentional wastage) or, even worse, if we end up discarding it at the retail and the consumer level (unwanted food – food waste)? Addressing and reducing those losses is an important part of achieving the kind of food system that we want.

Fortunately, for the first time ever, there is a relatively explicit goal (12: Ensure sustainable consumption and production patterns), and specifically a target,

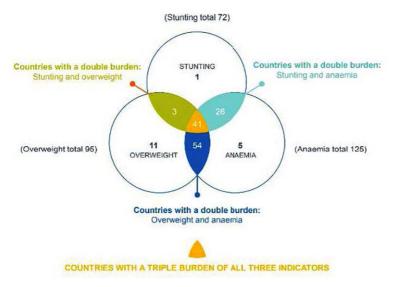


Figure 4. *Source:* Global Nutrition Report (2018). Image by Jessica Fanzo, Crawford Seminar (14/02/18).

Target 12.3, that says by 2030 we will 'halve per capita global food waste at the retail and consumer levels' — which is extraordinarily ambitious when you look at the kind of waste that we see today — 'and reduce food losses along production and supply chains, including post-harvest losses'.

Getting the diet right

We have been talking about 'getting the diet right', this fourth area in Figure 3, already at the conference today. The basic message is that more than 50% of the world's population is not on a healthy diet at one or other end of the scale. Their diets are not right for a healthy and productive life. Figure 4 (by Jessica Fanzo) depicts the idea that 141 countries are suffering one of the triple burdens: stunting, overweight, or anaemia; 41 countries are suffering all three burdens. There are 141 countries where the diet needs to be made right. There is plenty of good news in terms of nutrition. 'Scaling up nutrition' is an initiative that is in 60 countries now, encouraging multi-stakeholder platforms, encouraging strategies on improved nutrition, and many other initiatives. Much of this happened in the last decade, showing there has been tremendous growth in explicit recognition of the importance of tackling undernutrition. The bad news is the amount of contrary advertising – for instance, along the ~12 km route from the airport in Dar es Salaam (Tanzania) to the hotel I estimated 80% of the signboards were advertising sugary drinks. I am confident though that we can win that battle if we put our minds to it.

Nutrition safety nets; Water sanitation & hygiene

It is obvious that many people cannot help themselves and need support: for example, very young children, women, the elderly and others. They should not have to be subject to market availability of nutritious food: that's the reason for the 'nutrition safety nets' (SDG 1) hexagon in Figure 3.



Figure 3 (augmented). Delivering results: An integrated multi-dimensional framework for investment. A productive, inclusive, healthy, sustainable & resilient food system.

'Water, sanitation & hygiene' (Figure 3) is a topic very rarely mentioned as part of the food system. Even if all the other five points of the model were under control, neglecting the importance of clean water means the body would be unable to utilise those nutrients: food and nutritional security requires availability, access and *utilisation*. I am not suggesting that ACIAR starts a program on Water, Sanitation & Hygiene, but that goal needs to be integrated with improvements in these other areas.

Obviously the components in Figure 3 are not enough. At the bottom left of Figure 3 (as augmented above) I have added SDGs that I think of as 'cross-cutting accelerators': Gender, Income & Employment, Health, Education, and of course Good Governance: every one of the areas in Figure 3 can only be effective through good governance and strong accountability.

Action points

Governance (SDG 16)

Finally, here are a few action points that I think will be needed if we are to deliver on this kind of a plan to achieve such a food system.

• Develop and support leaders to exercise political will: 'Nourish & Prosper' In places around the world where there have been successes, they are often because of very charismatic, sincere and committed leaders who have delivered on these promises and brought down malnutrition in their countries. I encourage us all to emphasise the message 'nourish and prosper'. Jessica Fanzo earlier showed us data on the penalties of poor nutrition. We need to start talking to ministries of finance and explaining that good nutrition is good for economies; it is not social welfare. They need to think of nutrition as an economic development program, part of the national economic development plan.

We have to acknowledge complexity and interconnectedness of food systems

We need to stop saying things like, 'We produce enough food, we don't need to focus on increasing production or productivity'. That *does* have to be part of it; we *do* have to produce food more efficiently and more effectively. Cutting food waste and food losses will certainly help, but they are not the whole answer. Improving the markets, making them work better ... all these are important. If we are serious about transforming the food system to achieve the kinds of characteristics we want, then *all* of those areas need to be tackled.

Synthesise best practice across the six investment areas

We need to synthesise best practice across those six areas in Figure 3 and, of course, in other areas as well. Particularly for those first three areas I discussed above, this is where an organisation like ACIAR and universities and other knowledge institutions have a major role to play. As well as developing new technologies and new ideas and innovation – that has to happen of course – they could be synthesising and adapting ideas.

- Design and execute practical national food-system strategies & plans

 Jessica Fanzo and I have both been working with a number of countries as they synthesise where they are in terms of SDG 2. The aim is to enable organisations, including the World Food Programme among others, to devise programs that are sensitive to those countries' existing information, and to design and execute practical food system improvement strategies. In most places we visit, there are several as many as 15 strategies related to the food system: nutrition strategies, agriculture strategies, rural development strategies, water resource strategies, and so on. They need to be brought together more holistically into food-system strategies and plans.
- Establish and nurture cross-sectoral, multi-institutional & resultsdriven partnerships to align and enhance implementation: SUN+

We have talked about the importance of bringing different stakeholders together, but these convenings should not just be a 'talk shop'. We have seen that a number of countries have brought together teams to act across different ministries and different sectors. However, it is much harder to find forums and partnerships that are *actually effective* in implementation. It is important that they align in terms of implementation: they should not just coordinate but also *implement* programs together. I think the SUN (Scaling Up Nutrition) Movement does a great job. For those of you not familiar with SUN, I urge you to look at the SUN Movement, though I believe they do not go far enough. There needs to be more than coordination through SUN. And they are not really including agriculture and some of the other important areas I have discussed in this paper.

Mobilise and allocate the needed financial & human resources

Also, we need to mobilise and allocate the much needed resources: the financial resources and the human resources. Much of that has to happen at the national level, which means it will involve national budgets. Nutrition gets a paltry amount of resources for nutrition-specific programs, or even nutrition-sensitive programs, in most budgets. There needs to be more advocacy to include nutrition more explicitly and more accountably. In a number of places,

particularly the international finance institutions, the funding allocations have diminished, including for agriculture. Certainly a lot of funding has gone into health over the last 15 years, but nutrition is still, I would say, an orphan program here.

One very innovative program, which Australia supported, started in about 2008 or 2009, just after the food crisis: it is the Global Agricultural Food Security Program (GAFSP). We need to have a global fund of some kind that takes a holistic approach and mobilises complementary finance in the six investment areas I have described as essential for a better food system.

Final comment

Can we achieve SDG 2, that very worthy goal? Although I am a great optimist I think we cannot and will not achieve SDG 2 by 2030, except in some countries perhaps. We will not end hunger; we will not end all forms of malnutrition. However, I do believe that if we make a start right now we can, by 2050, come up with the kind of food system we need.

The reasons why I am relatively confident are because this conference is so well attended today, and also because a good many of you in the audience are from a younger generation than me. Also, I teach a Masters Program at Columbia University called 'the MPA in Development Practice', and I am seeing enthusiasm for and commitment to this topic from my students. They are in their 20s or early 30s, going out into the world, working in UN agencies, working in the private sector, working with governments, starting up their own social enterprises to work on these topics. That makes me pretty optimistic that we can achieve this SDG 2++ probably by 2040 or 2050, rather than 2030.

References

Columbia University MPA in Development Practice.

https://sipa.columbia.edu/academics/programs/mpa-development-practice Global Agricultural Food Security Program. https://www.gafspfund.org/ Global Nutrition Report. 2018.

https://globalnutritionreport.org/reports/global-nutrition-report-2018/ Scaling Up Nutrition. http://scalingupnutrition.org/

Glenn Denning is Professor of Professional Practice at Columbia University's School of International and Public Affairs, where he directs the Master of Public Administration in Development Practice. He chairs the Earth Institute's Practice Committee and is Senior Policy Adviser for the UN Sustainable Development Solutions Network. Denning has advised governments and other organisations on agriculture and food security in more than 50 countries. He served on the UN Millennium Project Hunger Task Force (2004–06), the Senior Steering Group of the UN High Level Task Force on the Global Food Security Crisis (2009–13), and the Technical Advisory Committee of the Global Agriculture and Food Security Program (2010–13). Denning, a graduate of the University of Queensland, worked in the CGIAR System for 24 years and held senior management positions at the International Rice Research Institute (IRRI) and the World Agroforestry Centre.