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Hopes pinned on SDGs

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Dear Reader,

When the international community of states adopts the Sustainable Development Goals (SDGs) in New York in September 2015, the Millennium Development Goals (MDGs) will once and for all be a thing of the past. The annual progress report for the eight goals has again and again given rise to heated debates between politics, science and civil society. Developments differ considerably from region to region, and arguing over the indicators may be justified, but it cannot be denied that the MDGs have been successful – at least absolute poverty has been halved since 1990, and 90 per cent of children in developing countries are today completing primary education.

Nevertheless, the positive results should not distract attention away from the weaknesses. The MDGs have neglected one important factor in poverty reduction, that of empowering people, as they have the specific conditions in conflict-affected countries and the aspect of environmental sustainability. In addition, they have continued the traditional paternalist aid relations between the Global North and the Global South instead of abandoning them. Therefore – and also because power relations in the world have shifted immensely since the MDGs were adopted – countries agreed to replace the MDGs by a new set of goals at the Rio+20 Conference in June 2012. Sarah Hearn and Jeffrey Strew of New York University describe how the MGDs evolved into the SDGs and what the current state of debate is (p. 6). What is special about the SDGs, and above all, what is needed for the ambitious agenda – after all, the latest proposal has 17 goals and 169 targets – to be implemented? One important difference from the MDGs is that the SDGs apply equally to all countries. This is a paradigm shift that could result in more equality not only between North and South but also in the countries themselves, as Roberto Bissio of the Third World Institute explains (p. 19).

We asked Ellen Funch of GIZ and Jes Weigelt and Ivonne Lobos of the Institute of Advanced Sustainability Studies to take a closer look at two crucial factors in sustainable rural development: food and nutrition security on the one hand and soils on the other. Which of the 17 proposed SDGs address these topics, and are they given the significance that they deserve? (pages 10 and 13). The German Federal Government's "One World – No Hunger" Initiative is also aimed at supporting the SDGs. Stefan Schmitz of Germany's Development Ministry shows the close interrelations between the individual targets and pinpoints what the measures of the Initiative address (p. 22).

The adoption of the SDGs is in fact merely the start of the post-2015 process. For afterwards, the goals have to be supported by the right indicators so that the agenda can be implemented and the achievement of targets can be measured. Lauren Barredo und Achim Dobermann outline the recommendations of the Sustainable Development Solutions Network (p. 16). However, alongside all the hopes it is raising, the post-2015 process has also come in for criticism. For example, there is considerable disagreement in civil society regarding the issue

of whether it makes sense to put a price on nature and thus integrate it in an overall economic assessment, as Jürgen Maier of the Forum on Environment and Development describes (p. 28). Stefan Klasen of the University of Göttingen is disillusioned and maintains that it is precisely those who used to be at the focus of the MDGs – human beings – who are now being eclipsed in the maze of hundreds of goals, targets and indicators (p. 26).

In Kenya, journalist Klaus Sieg visited the NGO Rural Service Programme, which promotes the growing and consumption of traditional, nutrient-rich cereal and vegetable varieties. For many families in the mountain region above Lake Victoria, malnutrition has since been a thing of the past. Children can concentrate better at school, while the adults can cope better with day-to-day life (p. 31).

Simple technologies form the core of the "Postcosecha" programme launched by the Swiss Development Cooperation in Central America more than 30 years ago to protect small farmers from post-harvest losses. Most farm families in the region have opted for acquiring small metal silos, which have not only sustainably increased food security but also boosted local trade. Positive experience with appropriate, easy to manage grain storage technologies is now also benefiting a multitude of small farmers in sub-Saharan Africa (p. 34).

However, projects sometimes result in exactly the opposite of what they were intended to achieve, for example by encouraging child labour instead of preventing and reducing it. There is a particularly big danger of this in family-based subsistence agriculture, where parents have to rely on the work of their children. A team of Germany's Centre for Rural Development (SLE) at Humboldt University Berlin has examined six agricultural projects in Cambodia to see how these projects can meet their responsibility (p. 37).

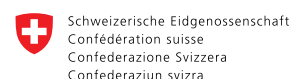
Many believe that owing to climate change, the world is also going to have to accommodate a rising number of "climate refugees". But what is the relation between climate change, environmental degradation and migration really like? A transdisciplinary research project has taken a closer look at two areas of the Sahel zone. Shifting rainfall patterns and insufficient yields are indeed an important reason to migrate during the dry season, as Diana Hummel of the Institute for Social-Ecological Research in Frankfurt has established. However, a monocausal explanation falls short of the issue (p. 40).

Enjoy reading!

Silvia Richter



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Direction du développement
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News

- 4 2nd International Congress on Hidden Hunger
- 5 Partnerships & private business in the post-2015 process

Focus: Hopes pinned on SDGs

- 6 The Post-2015 Sustainable Development Goals: a historic opportunity
- 10 Food and nutrition security in the SDGs – where are we heading?
- 13 Sustainable soil management is essential to achieving the SDGs
- 16 Monitoring progress on agriculture and rural development
- 19 The SDGs, a paradigm shift towards more equality
- 22 „One World – No Hunger“: a look at the German Development Ministry’s Initiative

Opinion

- 26 SDGs: Better process, worse outcome
- 28 Nature as a commodity, or: Does nature have a value? – Two viewpoints on a current debate

International Platform

- 31 Fitter and healthier with traditional varieties – an example from Kenya
- 34 Simple technology, big impact: Enhancing food security with post-harvest management systems in Central America and sub-Saharan Africa
- 37 Reducing child labour in agriculture through agricultural projects

Scientific World

- 40 Climate change, environment and migration in the Sahel



Photo: A. Emmerling



Photo: A. Dobermann



Photo: SDC



Photo: M. Brehmer/terre des hommes

How to combat hidden hunger?

Almost every third human being suffers from hidden hunger, i.e. a lack of micronutrients, and world-wide, around 170 million children under the age of five years are stunted. Africa and Asia are particularly strongly affected. There, more than half of the children in this age group suffer from stunting. World-wide, over one third of deaths among children under five years old are associated with malnutrition. Among these children, mortalities are significantly more frequent than among children with a sufficient supply of micronutrients. This was reported by Robert Black of the Bloomberg School of Public Health at Johns Hopkins University, Baltimore, USA, at the 2nd International Congress on Hidden Hunger. The event was held at the University of Hohenheim in Stuttgart, Germany, in early March.

■ What the mother eats is crucial

However, the course for a child's healthy development is set long before birth. Black maintains that the mother's state of health already plays a central role ahead of conception. Surveys from India show that around a third of stunting can be traced back to a reduced growth of the foetus. Therefore, Black believes that measures applied only during pregnancy are insufficient. There are a wide range of consequences arising from a lack of micronutrients during the period in the womb. For example, iodine deficiency reduces growth, while a lack of iron slows down neurological development. If women are administered iron compounds, this will have a positive effect on the children's performance at school, as studies have shown. Not only is hidden hunger a human tragedy, it also causes costs for the economy. Black demonstrated that a country spends eight per cent of its economic performance on undernutrition.

A vast number of case studies were presented at the conference.

The period following birth up to the second year of life is just as important in a child's development as the period in the womb. In most middle- and low-income countries, babies and infants do not receive adequate and sufficient food after the breastfeeding phase. Above all, small children do not obtain enough zinc and iron. In addition to money, however, mothers frequently lack the knowledge needed to maintain a balanced diet for themselves and their children. A case study in Western Kenya showed how adding five wild local plants to food ensured that meals contained the recommended dosage of iron for women and for infants of up to 23 months of age. Therefore, combining local knowledge and local plants with science was a demand heard again and again at the conference.

■ Food trees for better diets

Surveys by Katja Kehlenbeck of the World Agroforestry Centre (ICRAF) demonstrated that local food trees can make an important contribution to a nutrient-rich diet, too. In addition to fruit, these also include trees such as the Moringa, the baobab or the bread fruit tree, the fruits of which even serve as staple food. The leaves of the oil palm are a valuable provider of nutrients, too. For example, just nine grams of oil palm leaves cover an adult's daily vitamin C requirement. Some baobab varieties also have a very high vitamin C content. And fresh moringa leaves are true nutrient bombs. A hundred grams

of them contain three times as much vitamin C as an orange and ten times as much vitamin A; they also have high levels of calcium and iron.

Properly combined, indigenous food trees can provide a family with vital micronutrients throughout the year, as surveys from Kenya and Tanzania demonstrate. This is above all important during the hunger gap in the period between August and December. At the same time, the leaves and fruits are an important source of income for the women. Kenyan farmers grow eight to 13 fruit trees rich in vitamin A, and almost all of the farms examined have mango trees. However, Katja Kehlenbeck stresses that as mango cultivation increases, varieties are grown containing less vitamin A than the local varieties.

Diets change as nutrition transition increases. In West Africa, for example, adult obesity rates increased by 115 per cent over the past 15 years, and today, mortalities on account of non-communicable diseases exceed those caused by HIV/AIDS. Gudrun Keding of Bioversity International examined the dietary patterns of women in Kenya and Tanzania and arrived at the result that women's diets clearly reflect greater diversity, only that this diversity often merely comprises the consumption of more sugar, white flour and white flour products or other products rich in calories – at the expense of micronutrients. Above all younger women tend to prefer such a diet. However, changes



Photo: A. Emmerling

in dietary habits coincide with a different perception of being plump or thin. For example, in Tanzania, “plumpness” is regarded as something negative, like

in Northern countries. The survey demonstrated that the consumption of energy-dense food not only poses a problem in urban areas but is also on the

increase in rural areas. Dietary patterns ought to be established to achieve a balanced diet, Keding maintained.

Beate Wörner, Fellbach, Germany

Partnerships & private business in the post-2015 process

One of the core elements in the Post-2015 Agenda is a global partnership for sustainable development in which government, private sector and civil society actors assume common responsibility. Is this partnership approach based on voluntary regulations suitable for contributing to solving the global problems? And which role can and should private business play in this context? A conference held jointly by the organisations Forum Environment and Development and Brot für die Welt in Berlin/Germany in late February 2015 addressed these key issues.

The private sector has already been involved in global partnerships and hence also in the post-2015 process for a long time – for example

- via the “Major Groups”, which are a total of nine groups that have been formalised since 1992 (incl. business, NGOs, farmers, children and youth, ...) and can participate in the UN activities on achieving sustainable development;

- via the United Nations Global Compact – an initiative launched in 1999 supporting cooperation between the UN and corporations in implementing the Millennium Development Goals;

- via the Leadership Council of the Sustainable Development Solutions Network, which is one of the key actors in the development of indicators for the implementation and measurement of progress made with the SDGs (also see article on pages 16–18).

■ What development and for whom?

It is true that the private sector has long been involved in developing the rules for international cooperation.

And also, more and more governments have been opting for coalitions with the private sector in their development cooperation. Antonio Tujan, Managing Director of the Philippine-based organisation IBON International, summarised the danger that many civil society organisations see in this state of affairs as follows: influencing public policy, undermining of governance and the implementation of measures and projects that bypass the needs of the local population. In the field of health, for example, concentrating on combating HIV/AIDS results in neglecting measures against other diseases that are often more important for individual countries (such as malaria in Rwanda) or the setting up of basic health infrastructure (such as hospital building in Ghana), Tujan maintains. In agriculture, local business structures, such as the large public corporations for seed production and distribution that have traditionally operated in Bangladesh and India, are destroyed as multinational corporations take over activities, the all too familiar consequence being that many farmers are no longer allowed to plant their own seed. Tujan also views growing concentration processes like the tying up of supermarkets with agro-multinationals critically. If partnerships were established, a clear set of rules had to apply for them including partnership equality, democratic country ownership, inclusivity and participation, and transparency.

■ GFP put to the test

The German Food Partnership (GFP), founded in 2012, was discussed as an example of partnerships with the agricultural sector. Unlike with many other partnerships, it also involves medium-sized enterprises, as Martin Märkl, Senior Sustainable Development

Manager of Bayer CropScience and GFP Co-Spokesman, stressed in Berlin. He referred to the example of the Better Rice Initiative (BRIA), which is aimed at a better integration of smallholders in value chains in Thailand, Indonesia, Vietnam and the Philippines. Märkl explained that the rice sector was facing big problems in Asia: poor income levels, a lack of young farmers, and a partly disastrous environmental impact. In the countries involved, BRIA is to ensure stable markets and sustainable production. In addition, gaps arising from the withdrawal of government extension services are to be filled – even if it is not up to the private sector to assume government responsibilities, as Märkl stresses, adding that: “Our consulting is product-neutral.”

David Hachfeld, an economics and globalisation adviser with Oxfam Germany, again voiced his criticism of the GFP, maintaining that the concepts were designed for a certain target group, but not together with it. “Representatives of farmers, who ought to be centre stage, were at none of the GFP meetings,” Hachfeld said. He also criticised the technology-based approach of the initiative and the fact that with it, the German Federal Government was forfeiting far too much scope for action. Hachfeld called for seeking cooperation with companies in the countries themselves in the respective projects rather than pinning hopes on the “usual suspects”, the transnational corporations. For there was agreement among the participants in the debate on at least one issue: neither partnerships nor the private sector are bad per se.

Silvia Richter

For a more detailed account of both events, see www.rural21.com > News



Photo: UN/E. Debebe

At the Rio+20 closing ceremony in June 2012 (f.l.t.r.): Nassir Abdulaziz Al-Nasser, the then President of the UN General Assembly; Ban Ki-moon; UN Secretary-General; Dilma Rousseff, President of Brazil; and Muhammad Shaaban, UN Under-Secretary-General for General Assembly Affairs and Conference Management. This conference saw the official launching of the SDGs.

The Post-2015 Sustainable Development Goals: a historic opportunity

In September 2015, the Sustainable Development Goals (SDGs) are to be adopted in the context of the Post-2015 Agenda. In what way do the SDGs differ from the Millennium Development Goals? What does the community of states expect from their introduction? Our authors describe the background of the process and the latest developments in the debate.

The Millennium Development Goals (MDGs) were a game-changer because they channelled aid and de-

veloping countries' revenues into a discrete package of priorities for eradicating extreme poverty. Undeniably, significant progress was made across peaceful developing countries against the eight MDGs (see box). According to the World Bank, absolute poverty has been halved (although not evenly in each country and region). In 1990, 43.1 per cent of the population in developing countries lived on less than 1.25 US dollars (USD) a day; by 2010, this rate dropped to 20.6 per cent. The world is close to attaining uni-

versal primary education too – 90 per cent of children in developing countries are completing primary education (although sub-Saharan Africa is behind at 70 %) (World Bank, 2014).

The MDGs, however, are tainted by serious criticisms. They neglected to tackle conflict and to build national institutions, which contributed to the world leaving behind 1.4 billion people in the fight against poverty. That is 20 per cent of the world's population who now live in conflict-affected

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countries that have weaker institutions and lower access to rural populations (OECD, 2015). The MDGs have also been criticised for being too narrowly focused on health and education, for addressing the symptoms rather than the causes of poverty (therefore not sufficiently empowering people), and for not advancing environmental sustainability.

Finally, the MDGs have been criticised for perpetuating traditional paternalist aid relations between countries of the “north” and “south”. The world has changed significantly since the MDGs were agreed. The richest countries experienced deep financial crisis from 2008, while the investments of some of the BRICS (Brazil, Russia, India, China and South Africa) and other rising powers in developing countries have grown exponentially. Many developing countries are more confident than ever about pursuing their own development paths, if they can harness the benefits of globalisation (such as trade, foreign direct investment and technology), and if they can generate employment for growing workforces.

At the UN Conference on Sustainable Development hosted by Brazil in June 2012 – also known as Rio+20 – countries agreed to replace the MDGs with a new, universal set of Sustainable Development Goals (SDGs). The SDGs are intended to reflect these global shifts and to address the common critiques of the MDGs. As a result, the vision for the SDGs is more ambitious than ever. Although voluntary, the SDGs are expected to influence the domestic policies of all governments up to 2030 – in high, middle and low-income countries alike. They are to be based on the three pillars of sustainable social, economic and environmental development; and they are intended to achieve more inclusive and sustainable globalisation for all.

In September 2015, world leaders will convene at a UN Summit in New York, USA, to endorse the new global development framework. The rest of this short article reviews the stakeholders, the substance, and the

process towards agreeing on a new global development deal.

■ Stakeholders: inclusive negotiations so far

The post-2015 negotiation process created opportunities for a wide range of actors to participate in the formulation of the proposed SDGs. Unlike the MDGs, which were drafted in a small group before the Millennium Summit in 2000, Rio+20 tasked the UN General Assembly to establish an inter-governmental Open Working Group (OWG), comprised of 70 countries that would share 30 seats at the negotiating table, to develop a draft set of goals. This level of developing country inclusion in shaping an international development framework is (disturbingly) unprecedented.

In July 2014, after nearly a year and a half of negotiations and consultations, the OWG – co-chaired by Hungary and Kenya – proposed a draft framework for 17 SDGs and 169 targets. To develop the framework, the OWG drew on:

- the Rio+20 outcome document;
- countries’, regional organisations’ and blocs’ negotiation priorities, which were considered during thematic discussions and drafting sessions of the OWG;
- technical advice from the United Nations;
- written contributions and advocacy by civil society organisations. One foundation concluded that contributions from civil society proved

influential in securing more politically contentious goals such as promoting peaceful societies, reducing inequality within and between countries, tackling climate change, and promoting sustainable consumption and production (Adams, B. and Tobin, K., 2014);

- the report of the High-Level Panel on the Sustainable Development Goals. The High-Level Panel was a 27-member group of eminent persons, including representatives of governments, academia, the private sector, and civil society;
- the results of the UN-led MY World online survey. The survey solicited the input of over seven million people to date, and captured data on citizens’ top 6 preferences from 16 available global priorities.

■ The draft SDGs: universal and ambitious

The OWG’s 17 draft SDGs are listed in the box on page 8, covering the three pillars of sustainable economic, social, and environmental development agreed in Rio. In addition to their universality, some key differences from the MDGs are that the SDGs build upon existing international commitments to health and education by committing to improving the quality, not only quantity, of services. In addition, they encompass previously neglected areas, including to promote peaceful societies; to reduce inequality within and across societies; to promote sustainable consumption and production; to tackle climate change; to preserve ecosystems and natural resources; and to build safe human settlements and improve food security.

■ The substance of the SDGs

Form – The OWG’s proposal for the SDGs is a political compromise. A number of countries have noted that there are major technical problems with the targets – some are “outcomes” while others are “indicators”. Other (mainly “northern”) countries have argued that having 17 goals and

The Millennium Development Goals

- 1) Eradicate extreme poverty and hunger
- 2) Achieve universal primary education
- 3) Promote gender equality and empower women
- 4) Reduce child mortality
- 5) Improve maternal health
- 6) Combat HIV/AIDS, malaria, and other diseases
- 7) Ensure environmental sustainability
- 8) Global partnership for development

17 Proposed Sustainable Development Goals

- 1) End poverty in all its forms everywhere
- 2) End hunger, achieve food security and improved nutrition, and promote sustainable agriculture
- 3) Ensure healthy lives and promote well-being for all at all ages
- 4) Ensure inclusive and equitable quality education and promote life-long learning opportunities for all
- 5) Achieve gender equality and empower all women and girls
- 6) Ensure availability and sustainable management of water and sanitation for all
- 7) Ensure access to affordable, reliable, sustainable, and modern energy for all
- 8) Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- 9) Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation
- 10) Reduce inequality within and among countries
- 11) Make cities and human settlements inclusive, safe, resilient and sustainable
- 12) Ensure sustainable consumption and production patterns
- 13) Take urgent action to combat climate change and its impacts (acknowledging that the United Nations Framework Convention on Climate Change [UNFCCC] is the primary international, intergovernmental forum for negotiating the global response to climate change)
- 14) Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- 15) Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- 16) Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- 17) Strengthen the means of implementation and revitalise the global partnership for sustainable development

The full OWG proposal for the SDG framework is available at:

► <https://sustainabledevelopment.un.org/focussdgs.html>

169 targets is too ambitious a proposition to effectively implement in all countries. The Group of 77 countries of the “south” (G77) contended that the proposal of the OWG should be preserved as it is because the process for getting there was open and transparent. At the time of writing, it appeared unlikely that the goals would be changed, although there may be scope to improve the technical quality of some of the targets. At the end of 2014, the UN Secretary-General, Ban Ki-moon, produced a Synthesis Report in which he proposed six “essential elements” of the universal SDGs – dignity, people, prosperity, planet, justice, and partnership (UN, 2014). These elements are intended to help organise and communicate the ambition of the agenda to all people (17 goals are

hardly memorable). The OWG’s proposal, along with international commitments to implementation and to monitoring, are likely to form the main elements of a new Declaration in 2015.

Ambition – The framework contains many ambitious “zero-based” goals and targets, such as eliminating poverty, ending violence against women and children, and ending all forms of discrimination, as well as ambitions to improve the quality and universal access to a wider range of public services. Achieving heady universal ambitions over the next 15 years will need to target aid where it is needed most, will need more loans for middle income countries, a growth in domestic resources, greater private sector investment, technology transfers, re-

mittances from migration, trade and climate finance, among other areas. Multiple new global partnerships will be needed for many countries to come close to achieving the goals by 2030.

Function – The 17 goals are intended to guide all countries’ domestic development priorities, to shape the elements of new global partnerships around aid, trade, climate finance and private financial flows, and to shape monitoring of progress in development up to 2030. Some countries have pointed out major challenges to monitoring and implementation of the framework. Even minimum levels of data collection for 169 targets could be financially prohibitive, especially for a large number of countries who may lack the resources to effectively implement and monitor the agenda. Furthermore, universal implementation could be undermined by selectivity in national implementation, while there are many goals and targets that the world has yet to learn how to implement. Agreeing the new framework is the start, and not the finish, of framing a new global development agenda.

Measurability – It is likely that the UN will need to play a key role in monitoring the global framework. Creating a data revolution must be at the heart of implementing the agenda, even MDG data remains partial for some countries, especially in rural areas. In order to establish a baseline of data for measuring progress towards achieving the SDGs, data collection needs to be more transparent and systematic and it needs to start now. The UN Statistical Commission will oversee the development of an indicators framework for the post-2015 development agenda, and agree measures to implement a monitoring system.

■ Next steps in the negotiations: Four multilateral processes

In September 2014, the UN General Assembly adopted by consensus a resolution deciding that the OWG’s proposals shall be the main basis for integrating the SDGs into a broader post-2015 development framework.

This marked a big leap forward in framing the post-2015 development agenda. International attention in 2015 must turn to how to implement the SDGs.

Securing a deal will require continued inclusion of low-, middle- and high-income countries in order to ensure enough wins for enough constituencies. But realising universal ambitions will also require engaging an even wider range of stakeholders in the debate outside New York in order to close the gap between grand ambitions and resources. Foreign ministries will need to engage with domestic ministries on how to implement a universal framework. Political leaders must communicate with their own citizens about the draft framework. Growth and job creation will revolve around the actions of the private sector. Their inclusion in the debate must be ramped up, and civil society, governments and the private sector must coalesce around new global partnerships to achieve the SDGs. And of course finances must be found to implement the agenda.

The political pressure is on. Not only is 2015 the year for deciding a successor framework to the MDGs, it is also the year of UN Climate Change talks, Financing for Development and WTO negotiations. These processes are all pivotal for securing new global partnerships and finance, and failure on one track risks souring the other three, or leaving large holes in imple-

mentation. Governments and other stakeholders have some of the following opportunities:

The post-2015 development framework negotiation track. In January 2015, UN member states recommenced formal negotiations on the SDGs, their “means of implementation” and the Universal Declaration to be adopted at the Summit in September 2015. They will be expected to meet for multi-day negotiating and drafting sessions each month until the UN Summit in September. Partners around the world can start now to form ideas and actions for new global partnerships to implement the SDGs.

The financing for development negotiation track. International Financing for Development negotiations are proceeding through three drafting sessions in January, April and June 2015. The negotiations will culminate at the Third International Conference on Financing for Development, to be held in Addis Ababa, Ethiopia, in July 2015. It will convene high-level political representatives as well as relevant institutional stakeholders, non-governmental organisations and business sector entities. The conference aims to answer major questions around how to finance the SDGs. A convincing deal at the UN Summit on the SDGs in New York in September will rely heavily on outcomes in Addis. So far, countries have not clarified the tasks and offers that they are willing to put on the table around key areas such as aid,

non-concessional finance, trade, private sector funding, intellectual property and technology or migration.

The climate negotiation track. Climate negotiations will culminate at the UN Framework Convention on Climate Change COP 21 Summit, to be held in Paris, France, in December 2015. The summit will convene member states to agree on the next chapter of global efforts to limit greenhouse gas emissions from 2020 onwards. Political progress towards Paris may positively or negatively affect the political atmospherics around the UN development summit in New York in September.

The WTO negotiation track. Negotiations on trade will culminate at the 10th WTO Ministerial Conference, to be held in Nairobi, Kenya, in December 2015. As the Ministerial Conference is the foremost decision-making body of the organisation, the WTO will convene all members to potentially agree on a trade package that could benefit least developed countries.

By the end of 2015, governments will have been able to capitalise upon a historic opportunity to address the world’s most pressing development problems for all countries and all people. Yet, to seize this opportunity, they must now build a collective and coherent vision for making good on paper commitments to the SDGs.

For references, see: www.rural21.com

The ‘Back to Learning’ campaign was launched in Juba, South Sudan, by UNICEF and South Sudan President Salva Kiir in February 2015. The campaign aims to bring education opportunities to 400,000 children whose schooling has been interrupted by the conflict in the country. In contrast to the MDGs, topics addressed by the SDGs will include conflicts and the development of peaceful societies.



Photo: UN/IC Melwarite



Representatives of civil society organisations criticise that the right to food is not mentioned in any target of the SDGs; they demand more recognition of rights-based approaches.

Photo: J. Boethling

Food and nutrition security in the SDGs – where are we heading?

The demand to eradicate extreme poverty and hunger has been the centrepiece of the Millennium Development Goals; the first MDG stands for the inextricable link between poverty and people's ability to access safe, nutritious and sufficient food. How will the objective of achieving global food and nutrition security be embedded in the SDGs? Will the SDGs be a further step towards this target?

Since the Millennium Development Goals were developed in the aftermath of the UN Summit in 2000, the perceived relevance of global food security has rather increased: the food price crisis 2008/09 brought more attention to the global dynamics around food security, such as changing demographics and consumption patterns, effects of climate change, or international trade and price trends.

It was also a stark reminder of food security's importance for political stability when several countries experienced civil protest during the height of the food price crisis.

How food and nutrition security (FNS) and agriculture will feature in the new post-2015 development agenda is now crucial. The agenda is meant to reflect all these new dynamics in a more comprehensive, universal, sustainable and integrated set of goals.

a global set of goals and targets that would be universally applicable to all nations. The new set of goals was to combine development and sustainability aspects. The proposal by the intergovernmental Open Working Group (OWG) for such a set of Sustainable Development Goals (SDGs) was acknowledged by the United Nations General Assembly (UN GA) in September 2014, when it also decided that the proposal shall be the basis for integrating SDGs into the post-2015 development agenda (Resolution A/68/L.61).

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■ Where we currently stand

The United Nations Rio+20 conference resolved the development of

Among the proposed 17 goals and 169 targets, Goal 2 and its five targets are most prominent in terms

of food and nutrition security. **Goal 2** focuses exclusively on “end(ing) hunger, achiev(ing) food security and improved nutrition, and promot(ing) sustainable agriculture”. Rather than combining poverty and hunger in the same goal, as in MDG 1, the proposal contains a stand-alone goal dedicated to food security.

One key aspect is the eradication of hunger and achievement of food and nutrition security, similar to MDG 1c. However, while MDG 1c only considered caloric intake, the newly proposed goal specifically refers to ending “all forms of malnutrition”, including undernutrition, “hidden hunger” (lack of essential nutrients) as well as forms of overnutrition, such as obesity.

What is also new compared to the MDGs is a target on doubling agricultural productivity and the incomes of small-scale food producers that stipulates several conditions, such as access to productive resources and opportunities for non-farm employment. While these first three targets focus more on the social and economic dimensions, the remaining two mainly cover the environmental dimension. Target 4 asks to “ensure sustainable food production systems”, highlighting the need to maintain ecosystems and to improve land and soil quality, among other things. The last of the five targets specifically addresses the aim to maintain “the genetic diversity of seeds, cultivated plants, farmed and domestic animals and their related wild species”.

Three “means of implementation” (MoI), which have been included for each goal to highlight the requirements for the realisation of the targets, list important measures, including (2.a) increasing investment in rural infrastructure, agricultural research and extension services, etc., (2.b) the prevention of trade restrictions and distortions and (2.c) the proper functioning of markets.

Besides being addressed in Goal 2, food and agricultural aspects are also integrated throughout the proposal, beginning with paragraph 2 of the

Preamble referring to the commitment reiterated at the Rio+20 conference to “freeing humanity from poverty and hunger as a matter of urgency”.

Other important references are found on the “control over land” in **Goal 1** on poverty eradication, on the reduction of food losses and post-harvest losses in **Goal 12**, on sustainable consumption and production patterns, on the regulation of fishing in **Goal 14** on the sustainable use of oceans, seas and marine resources, and on striving for a land degradation-free world in **Goal 15** on the sustainable use of terrestrial ecosystems.

■ Progress, but also shortcomings

The way the agenda reflects food and nutrition security (FNS) and agriculture is quite comprehensive and clearly goes beyond the MDGs. Goal 2’s heading “end hunger, ...” leaves no doubt that the level of ambition is higher than in the MDGs. Rather than defining time-bound incremental steps, the proposal aims at the final goal of eradicating hunger within a generation.

The international community’s intention to have universal goals – that present a challenge not just for low-income countries but also for middle- and high-income countries – is reflected in various ways, among others:

- Target 2, with “malnutrition in all its forms”, also includes obesity, which has become a growing problem not only in middle- and high-income countries.
- Target 4 on sustainable food systems is a challenge for all countries, as is the target on food and post-harvest losses.

Another requirement for the goals was agreed in the Rio+20 outcome document, paragraph 247: They should be “action-oriented, concise and easy to communicate, limited in number”, or what is often referred to as SMART (specific, measurable,

attainable, realistic, time-bound). In the proposal, including Goal 2, most of the target phrases do not yet fulfill these criteria and would benefit from sharpened wording.

With the current content of the goals, the proposal broadly reflects the global policy consensus on FNS that has evolved over the past years through international dialogue in fora such as the Committee on World Food Security (CFS), the G7 or G20, or within the UN agencies.

However, international and German civil society organisations in the field of FNS have criticised some aspects. They deplore, for example, that the right to food is not mentioned in any target and demand more recognition of rights-based approaches. Neither is the environmental dimension integrated sufficiently into the targets in their view. Another concern is that the private sector should be assigned more responsibility for sustainable development and be held accountable (see also article on page 5).

In the intergovernmental process of the Open Working Group, there was reportedly not much controversial debate on the targets surrounding FNS and agriculture, except for agricultural biodiversity and trade. Most other discussions touched on details in wording.

■ The next steps

While the phrasing of the goals and targets is of course significant, there is actually a lot more to the agenda. Whether the SDGs will really trigger action and make a difference in food and nutrition security and agriculture depends on several other determinants of the future agenda that are still being developed and debated:

1. Indicators: The targets will be concretised and be made measurable through indicators. As yet, not even the process for developing the indicators has been decided. Agreeing on the indicators will then be another challenging task. While in some cases,

it is more a question of which and how many of the potentially suitable indicators to use (for example for food security), in others, it is still a question of how to measure the targets at all. Which indicators can be used to measure sustainable agriculture? Or the level of food and post-harvest losses? (See also article on pages 16-18)

2. Monitoring: Another important question is what kind of monitoring and review system will be established to track progress with the indicators and with achieving the SDGs – the OWG proposal speaks of an effective and robust mechanism. An international accountability system needs to be agreed and national capacities be built for it. Data availability and quality will be a challenge for many of the food-related targets.

3. Financing sustainable development: Also, the parallel process of Financing for Sustainable Development, leading up to the International Conference on Financing for Development in Addis Ababa in July 2015 and constituting an important contribution to the post-2015 development agenda, is expected to influence the implementation of the agenda through available and promoted means of financing. How much will the implementation of the agenda cost, and how will the costs be covered?

4. Other goals in the agenda: Whether or not there will be advances with ending hunger and malnutrition will depend not only on the specific wording in Goal 2, but also, of course, hugely on progress in other targets. For example, improving food and nutrition security in fragile states and complex emergencies is a major challenge which requires a multi-sectoral policy approach and advances with **Goal 16** on promoting peaceful and inclusive societies. Another challenge will be the ongoing structural transition in rural areas, where urbanisation, migration, changing demographics,

and climate change are having a huge impact on income and employment opportunities in farming. Policy answers to facilitate a ‘gentle’ transition will need to include a range of different approaches from large-scale employment creation in rural areas, to infrastructure investment and social security policies.

5. National targets: It is envisaged that all governments will set their own national target levels – “guided by the global level of ambition but taking into account national circumstances” (paragraph 18, OWG proposal). This will of course depend on each country’s development status and available capacities and resources. However, all countries have a certain scope or “room for manoeuvre” to determine their level of ambition. It is extremely important, if not decisive, that the government has a strong political will to take the agenda seriously and that its citizens demand adequate action.

6. Global partnership: The determination of the international community as a whole, where the level of national ambition and global ambition mutually reinforce each other, will be equally important for the realisation of the agenda. The OWG proposal thus makes clear that the goals’ implementation will depend on “a global partnership for sustainable development with the active engagement of governments, as well as civil society, the private sector, and the UN system”. FNS and the promotion of sustainable

agriculture have to be a key concern of this global partnership: Relevant actors need to push for an ambitious agenda setting and for mobilising coherent action of all actors.

Over the past years, various governments have made commitments to tackle food and nutrition insecurity as a priority issue, e.g. with low-income country governments developing national strategies and becoming part of the SUN (Scaling-Up Nutrition) movement, or African governments following the CAADP (Comprehensive Africa Agriculture Development Programme) process. Many high-income countries also made policy as well as financial commitments, most famously at the G8 L’Aquila Summit pledges in 2009. Several efforts for increased global policy coherence and coordination were made, in fora like the UN, the G7 and G20, or the CFS. The reform of the Committee on World Food Security (CFS) in 2009 was one example of shaping global governance and opening up the space to other stakeholders, especially civil society organisations and private sector representatives.

So a lot has happened in the past few years in the sphere of food and nutrition security and agriculture at national, regional and global level. The arrival of the SDGs should thus provide new impetus for building up further momentum, for using the created structures with new energy and for advancing on global food and nutrition security.

The future agenda still leaves many questions unanswered. For example how can we measure sustainable agriculture?

Photo: J. Boethling



An ambitious post-2015 development agenda will depend on soils

The sustainable management of soils is crucial to achieving the Sustainable Development Goals. This is evidenced by the analysis of the role soils play across the proposed agenda. However, some key aspects have not been sufficiently considered so far. Moreover, the SDGs will place increased demand on soils. Further advocacy is therefore needed to ensure that important soil and land related issues remain in the final declaration of the post-2015 agenda.

Soils around the world are being severely degraded. Conservative estimates warn of a current loss of 24 billion tons of topsoil each year because of wind and water erosion. Unsustainable agricultural practices are having negative impacts on soil resources as, for instance, some herbicides considerably suppress soil bacteria and fungi activity. The excessive use of nutrient inputs can also seriously alter biological balances and thus reduce soil biodiversity. Soils hold the second largest carbon pool on Earth after the oceans, but the equilibrium of this pool is greatly threatened by unsustainable land use changes. Despite the observed deceleration in the last decade, global forest area is still in decline, which jeopardises the effective conservation of soil resources and releases carbon dioxide into the atmosphere.

Soils play a key role in fighting poverty by supporting the livelihoods of people working in agriculture, one in three of all workers and over two thirds of the entire workforce in sub-

Saharan Africa. As we strive towards the widespread practice of sustainable agriculture, healthy soils will be key to the establishment of sustainable food systems. Furthermore, guaranteeing secure access and rights to productive land is going to be a stepping stone in empowering disregarded populations and vulnerable groups. For instance, improving gender equality depends on improved access by both men and women to productive resources like land.

The challenge to conserve soil resources is likely to intensify since population numbers will continue to rise as will the demand for energy and water. All these growing, and sometimes competing, demands will put greater pressure on continuously degraded soil and land resources. The SDGs must therefore reflect these trends and ensure that the protection of precious soil resources is guaranteed.

■ Where do soils play a role in the proposed SDGs?

The important role played by soils has been recognised in the Rio+20 outcome document, which contains the agreement to strive to achieve a land degradation-neutral world. The report of the High-Level Panel of Eminent Persons further supports this agreement and calls for systematic moni-



Photo: FAO/C. Bizzarri

Soil erosion caused by cattle grazing on steep slopes – only one of numerous reasons behind the degradation of valuable soils.

toring of the state of these resources in arid, semi-arid, and dry sub-humid areas. In addition, the United Nations General Assembly declared 2015 the international year of soils, which has reinforced the momentum in the international agenda to make the case for soils and ensure that the role they play for sustainable development is recognised.

The outcome document of the Open Working Group formed to propose SDGs drafts a set of 17 goals and 169 targets. Soils play a direct role in at least seven of the proposed goals (see box on page 14).

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Proposed goals and targets that relate to soil and land

GOAL 1: End poverty in all its forms everywhere

- 1.4** By 2030 ensure that all men and women, particularly the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership, and control over land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services including microfinance.

GOAL 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

- 2.1** By 2030 end hunger and ensure access by all people, in particular the poor and people in vulnerable situations including infants, to safe, nutritious and sufficient food all year round.
- 2.3** By 2030 double the agricultural productivity and the incomes of small-scale food producers, particularly women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non-farm employment.
- 2.4** By 2030 ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality.

GOAL 5: Achieve gender equality and empower all women and girls

- 5.a** Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance, and natural resources in accordance with national laws.

GOAL 6: Ensure availability and sustainable management of water and sanitation for all

- 6.6** By 2020 protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.

GOAL 7: Ensure access to affordable, reliable, sustainable, and modern energy for all

- 7.2** Increase substantially the share of renewable energy in the global energy mix by 2030.

GOAL 11: Make cities and human settlements inclusive, safe, resilient and sustainable

- 11.a** Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.

GOAL 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

- 5.3** By 2020 combat desertification, and restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.
- 5.14** By 2030 ensure the conservation of mountain ecosystems, including their biodiversity, to enhance their capacity to provide benefits which are essential for sustainable development.

■ Is the post-2015 agenda grounded enough?

As can be observed in the overview above, soils and land are strongly linked to the achievement of the SDGs but proposed Goal 15 on the protection of terrestrial ecosystems

puts the spotlight on the protection of land and soil resources, biodiversity and forests. The better integration of the environmental pillar of sustainable development has been a particular objective of the SDG process but the mainstreaming of this issue across the goals has only been partially success-

ful. The negotiations for soils within the context of the Open Working Group have not been amongst the most contentious topics, but there is opposition to a strong soils agenda based partially on the lack of agreement regarding the definition of the concept **Land Degradation-Neutral World** and the lack of consensus on indicators. A general support for targets on land degradation can be observed, but there have been calls for making them more precise and measurable. At this stage, the inclusion of the land degradation-neutral world language can already be seen as a positive step forward for the land and soil agenda, and it is crucial that it remains in the final declaration.

At the same time, the proposed goals are framed in a way that could lead to a silo approach for their implementation. On the one hand, the SDGs deal with individual topics and include targets to address the umbrella topic of the goal, but some of the issues addressed are interrelated, also with other goals and could lead to synergies and trade-offs. On the other hand, an agenda of 17 goals and the many accompanying targets and indicators will represent a challenging task for countries to implement in terms of financial resources and reporting. This means countries will likely have to choose the goals and targets that will receive priority, which could lead to a very ambitious goal, such as one to halt and reverse land degradation being left behind in order to achieve goals for poverty reduction or economic growth.

Furthermore, an analysis of the aspects covered in the SDGs that relate to these resources shows that major issues are addressed but some key aspects have been left out. For instance, it is widely accepted in the scientific and political community that soil and land degradation poses a challenge to sustainable development, and the need to address this global issue is covered under proposed Goals 2 (food security) and 15 (protection of terrestrial ecosystems). Soil restoration is also implied under Goal 6 for sustainable water management in target

Access by women to ownership and control over land is anchored in several places across the proposed goals and targets.

Photo: FAO/B. Nyakudjira



6.6, as there is a strong link between healthy soils and the replenishment of groundwater resources.

Moreover, soil and land degradation is not a solely physical and biochemical issue. It is very often linked to socio-economic aspects, which require a pro-poor and gender sensitive approach. Under **Goal 1** for poverty eradication, the aim is to guarantee access to and control over land, especially for poor populations. The situation is particularly acute in the case of women, as they generally hold fewer rights to land than men. The need to undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, is covered under **Goal 5**.

Two further important aspects are not addressed under the current agenda. The first is the crucial need to monitor and manage unsustainable land use changes which are expected to increase because of demand for food, feed, fuel and fibre. Soil sealing for construction will also contribute to this worrying trend. The second is the need to ensure an appropriate use of fertilisers as nutrient inputs. Very often, far more fertiliser is applied than necessary, and only a part of the application is effective, which means the rest is carried away by runoff or percolates down into the groundwater. These issues should be addressed in

an ambitious agenda for soils, and it is recommendable to include them if not in the goals or targets, then at the level of indicators.

■ Lack of integration of the SDGs poses a threat to soil resources

Soils offer a perfect example to show the need to move beyond silos in the SDG agenda. At the outset, it might seem that soil resources will be protected by default through the achievement of sustainable development goals for food security or ecosystem conservation. However, as a whole, the SDGs will place increasing and at times competing demands on soils. One example of this is the demand for food and energy. The projections of the UN Food and Agriculture Organization estimate that global agricultural production would need to increase by 70 per cent over the period from 2005/07 to 2050 in order to feed the growing world population sufficiently. According to these projections, crop production will need to increase by 1.1 per cent per annum. An additional one billion tonnes of cereals and 212 million tonnes of meat would have to be produced annually by 2050. At the same time, biomass demand for energy production will increase as biofuel use almost triples from 2012 to 2040 and will make up eight per cent of total road transport fuel demand by 2040.

An integrated approach to implement the post-2015 agenda is needed to manage these competing demands and find potential synergies, but such an approach will only be effective when accompanied by governance instruments that ensure access to fertile soils for poor and vulnerable groups. One option to ensure an integrated approach is to engage multiple stakeholders in the monitoring of implementation to ensure accountability and national ownership of the process. National stakeholders will be able to keep an overview of the protection of soil resources and to recognise and draw attention to unsustainable trends or practices.

■ Conclusions

Soils are owned and managed locally but fulfil globally relevant functions. This highly justifies the need for a global approach for the sustainable governance and management of these resources. Soil-related functions and ecosystem services need to remain spread across the proposed goals, and further advocacy efforts need to be made to ensure that they are integrated in the final declaration to be signed at the next United Nations General Assembly.

As the process to define the final set of SDGs reaches its final stretch, there is a need to engage in the development of strategies with a view towards the implementation phase of the agenda. This will require the setting of appropriate and globally relevant indicators and effective monitoring to allow the successful translation of the global goals into national contexts.

However targets for soils are phrased, further work will be required to define strategies to implement the SDGs for land and soils at national level. Monitoring and accountability processes that build on multi-stakeholder engagement are going to be crucial in this regard.

Monitoring progress on agriculture and rural development

The Sustainable Development Goals (SDGs) will amount to little unless backed by reliable indicators. Only with good metrics can the agenda be implemented and progress measured. Just like the SDGs themselves, the indicators are still in the discussion phase, with the Sustainable Development Solutions Network (SDSN) one of the many players in this process. They outline their recommendations in the following article, using rural development as an example to describe them.

The Sustainable Development Goals will confirm global aspirations for improving human well-being, while their targets will define success. To achieve these objectives clear roadmaps and robust indicators will be needed at the national and sub-national level. Indicators are both a management tool to help countries develop evidence-based implementation strategies for achieving the SDGs and a report card to measure progress and ensure accountability to a broad range of stakeholders. The Sustainable Development Solutions Network (SDSN) proposes the following principles to select strong indicators:

Limited in number: There are infinite ways to measure progress; therefore, there must be a conscious limiting of the number of metrics. Evidence-based indicators associated with well-tested methodologies and guidelines should be chosen. There will be trade-offs between metrics in terms of precision, scale and cost that are going to require a clear vision of measurement objectives at the start (Barrett, 2010).

Clear, with straightforward policy implications: Indicators should be easy to understand and communicate to all stakeholders. For example, indicators on agriculture need to be understood by farmers, policy-makers, business executives, researchers and consumers.

Allow for high-frequency reporting: Indicators should lend themselves to accurate, consistent, and continuous collection of data across both time and space. Metrics can and should change over time as the relevant questions and challenges evolve (Sachs, 2012; Lindenmayer, 2011).

Consensus-based in their selection: All stakeholders should be en-

gaged in the selection of indicators, especially data end-users, to increase the chance of success.

Constructed from well-established data sources: Indicators should draw on well-established sources of public and private data; methodologies for data collection should be based on international standards, recommendations, and best practices to facilitate international comparison. Countries must be empowered to collect and interpret their own data.

Disaggregated as much as possible: Because a central objective of sustainable development is to ensure social inclusion, metrics should be disaggregated by gender, geogra-

Reliable data collection and data evaluation, for example concerning the quantity and quality of harvests, form the basis for the development of indicators in the implementation of strategies for achieving the SDGs and for measuring progress.

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Photos: A. Dobermann



The prevalence of stunting and wasting in children under 5 years of age could serve as an indicator for achieving the targets of SDG 1, 2 and 3.

phy, socioeconomic status, disability, ethnicity, age, and other dimensions wherever possible.

Universal: The SDG indicators should apply to all countries and be supplemented by metrics tailored to national and local challenges. Not all indicators will be truly universal. For example, indicators for malaria or neglected tropical diseases (NTDs) will only apply to certain countries.

Mainly outcome-focused: It is generally preferable for indicators to track outcomes or the ends as opposed to the means; although, in some cases, input metrics may be needed for sustainable development.



■ Data and data accession gaps

Many information gaps hamper the ability to assess the progress of sustainable development, including insufficient data, inconsistent guidelines for measuring metrics, weaknesses in predictive models, and a lack of investment in new technologies for monitoring systems. One issue is the frequency and scale of data collection: aggregate national data from years ago does not aid policy decisions that must be made in real-time. Another issue is that while more and more actors – governments, international and regional organisations, research centres, private companies, etc. – are collecting data, there is often little co-ordination of activities or data sharing. In fact, businesses, academic institutions, and farmers themselves are collecting an ever-increasing amount of data, which is not yet part of official reporting mechanisms or easily accessible. We need to find new ways to co-ordinate collection and sharing data across sectors, while also controlling quality and data ownership, and protecting privacy.

Many current metrics are inadequate or contradictory; this lessens

their usefulness for policy-makers and practitioners. There are differences in methodologies and definitions for even basic measurements of crop yields, prevalence of poverty and hunger, and natural resource use or biodiversity (Bates, 2013; Heady, 2013; Barrett, 2010); therefore, misrepresentations and distortions of the current state of affairs are common. For example, aggregate national data on agricultural production, land use, food supplies, and poverty rates typically fail to include income distribution, agricultural waste, seasonal changes in production and consumption, exogenous shocks from weather or conflict, and market and climate uncertainties, all of which are important to target effective policy interventions. Statistical capacities in many sub-Saharan Africa countries are particularly dire (Jerven, 2013).

■ The need for a “data revolution”

A new, global information system built on the principle of open data sharing and real-time learning would help drive rural development and support achievement of the SDGs. Many data gaps (real or perceived) could

be filled if existing information and methodologies were better aligned and available to all.

The systematic, reliable collection of data to track progress will require significant investments in local, national, and global data collection and processing in all sectors. International agencies and Official Development Assistance (ODA) should support these investments. Governments should embrace digitally-enabled exchange of information and learning to accelerate the pace of development, democratise information, and empower farmers, consumers and investors to make informed choices. Our ultimate ambition should be to monitor nearly every hectare of existing farmland by 2030.

This “data revolution” could better track long-term trends or seasonal patterns in poverty, food consumption and production, nutrition, climatic and economic shocks, land use change, and more. The vast amounts of data collected would feed into a well-designed and well-directed global monitoring network to track, anticipate, and manage changes in the biophysical, economic, and social components of agriculture

and food systems around the world (Sachs, 2010; Sachs, 2012). This system would allow scientists, farmers, entrepreneurs, and policy-makers to find solutions to pressing problems, direct public and private investments in agriculture, allow for aspects of agriculture and food systems to be quantified and compared across time and space, and track progress towards meeting the SDGs.

Ultimately, all SDGs should be supported by online, real-time, place-based, and highly disaggregated data.

■ Indicators for the post-2015 development agenda

Discussion of which specific indicators will be chosen is still in the early stages. Dozens of governments, NGOs, UN agencies, academics and other stakeholders have put forward proposals. Most recommendations have focused on a particular issue or sector. The Sustainable Development Solutions Network has submitted a comprehensive proposal which makes recommendations for each of the 17 SDGs currently under consideration while limiting the number of indicators to 100. An excerpt of the indicator and monitoring framework proposed by the SDSN is presented in the box on the right.

There are many other groups proposing indicators for the SDGs, as well as groups advocating for changes to the targets. Many of them have offered comments to the SDSN during

Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture (7 proposed targets)

Potential and indicative indicator	Other goals indicator applies to
Proportion of population below minimum level of dietary energy consumption (MDG indicator)	3
Prevalence of anaemia in women of reproductive age (including pregnant)	3
Prevalence of stunting and wasting in children under 5 years of age	1, 3
Crop yield gap (actual yield as per cent of attainable yield)	
Number of agricultural extension workers per 1,000 farmers [or share of farmers covered by agricultural extension programmes and services]	
[Nitrogen use efficiency in food systems] – to be developed	
[Phosphorus use efficiency in food systems] – to be developed	12
[Access to drying, storage and processing facilities] – to be developed	
Annual change in degraded or desertified arable land (% or ha)	15
[Crop water productivity (tons of harvested product per unit irrigation water)] – to be developed	6

two rounds of public consultation, and we welcome additional comments and feedback on proposed indicators. It is crucial that final decisions be made through consensus and based on sound science. It is also important that this be done in a timely manner to reduce the lag between agreeing on the SDGs and being ready for action and implementation.

The new goals, targets, and indicators offer a flexible action framework that combines co-ordinated global action with country-specific, tailored

strategies and policy at the national level. This versatility is especially crucial in meeting rural development goals, which are highly dependent on local contexts such as climate, culture, or level of economic development. Such a framework defines a set of global priorities, which will be achieved by a diverse set of policy interventions. We are therefore optimistic that the SDGs can accomplish what they set out to do, and look forward to contributing towards their implementation.

For references, see: > www.rural21.com

The Sustainable Development Solutions Network

The Sustainable Development Solutions Network (SDSN) was launched by UN Secretary-General Ban Ki-moon in August 2012. Its aim is to mobilise scientific and technical expertise from academia, civil society and the private sector in support of sustainable development problem solving at local, national and global scales. It aims to promote integrated approaches to the interconnected economic, social, and environmental challenges that are addressed in the SDGs. The SDSN works closely with United Nations agencies, multilateral financing institutions, the private sector, and civil society. The SDSN Secretariat is hosted by Columbia University with staff in Paris, New York, and New Delhi.

For more information on the SDSN's work on indicators, including a complete set of their principals for setting indicators and opportunities to participate in public consultations, please visit > www.unsdsn.org/indicators.

More information on the work of the Thematic Group on Sustainable Agriculture and Food Systems is available at > <http://unsdsn.org/what-we-do/thematic-groups/sustainable-agriculture-and-food-systems>.

The Open Working Group proposal is available at > <https://sustainabledevelopment.un.org/focussdgs.html>.

The SDGs – a paradigm shift towards more equality

The Sustainable Development Goals differ radically from the current Millennium Development Goals in many aspects. Our author demonstrates the challenges that departing from a donor-oriented development framework poses – particularly for the North, and also with a view to its own development.

The first goal of the Millennium Development Goals (MDGs) promised to reduce by half by 2015 the proportion of people living with under one US dollar a day, with 1990 as the base year. This focus on extreme poverty is the essence of the MDGs. When the discussion about a new development agenda started, Mark Lowcock, permanent secretary of the UK Department for International Development asked “What about the other half?” in an opinion piece titled “After the MDGs: What next?” (Bond, 2012). The obvious answer for most of the development cooperation community was that the post-2015 agenda should “finish the task” (an expression frequently used in the MDG context).

And this is precisely what the first target of the first SDG Goal states: “by 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day”. It is also reflected in Goal 2.2. on ending all forms of malnutrition, or 6.1 on ensuring affordable drinking water for all. Thirteen of the 169 targets commit governments to ending hunger, reducing infant and maternal mortality and providing access to primary school and safe water “for all”, and they can be seen as addressing “the other half”.

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■ New challenges for the North

If the SDGs stopped there, the mandate for the UN system and the development agencies would basically be to continue doing what they are doing now until the year 2030. This is more or less what many traditional development actors have been proposing. The major innovation they have suggested is that, considering the “aid fatigue” and the crisis in donor countries, “partnerships” should be established to engage big corporations in the task.

But the SDGs go way beyond the narrow MDG agenda, which basically only concerns the poorest of countries having to achieve a minimum standard largely met already by middle and upper income countries, with the traditional and new donors as supporters. Thus, the very second target of the first Goal promises “to reduce at least by half by 2030 the proportion of men, women and children of all ages living in poverty in all its dimensions according to na-

tional definitions”. This target is also a challenge for some of the richest countries of the world. In the United States, poverty has been increasing in the last two decades and currently affects some 50 million people, by the official threshold of 23,850 US dollars a year for a family of four. UN Secretary General Ban Ki-moon proposed in his 2013 report titled “A Life of Dignity



In the United States, some 50 million people are currently affected by poverty.

for All” to “eradicate poverty in all its forms” as the first and main goal of the new agenda. The Open Working Group (OWG) raises the bar by proposing to “end poverty in all its forms **everywhere**” (emphasis added).

In a similar logic, target 3.8 demands all countries to ensure universal health coverage, and target 8.8 requests to protect labour rights, including those of migrant workers. Goal 5 of the SDGs, on the empowerment of women and gender equality, explicitly uses the word “everywhere” again, and its provisions on equal pay, recognition of the value of unpaid work, more political representation and sexual and reproductive health and rights were supported by women’s organisations from all continents and will require efforts in all countries. Even in Scandinavian countries that rank first in all gender indexes, the wage disparity between men and women is still at around 15 per cent.

In summary, over seventy of the 169 targets request developed, middle-income and transition countries to do something in their own domestic spheres, and that does not count those targets that request them to support the efforts of the countries with less resources.

The paradigm shift is also visible in Goal 16, on governance issues, which is a clear example of how the OWG departed from the mainstream vision of a donor-oriented development framework. This chapter was initially titled “Build peace and effective governance based on the rule of law and sound institutions”, where “peace” meant no domestic armed conflict in fragile states (and not, for example, the abolition of nuclear weapons), “sound institutions” were equated with unregulated markets, and “rule of law” was universally understood as a conservative plea to keep protesters out of the streets. That goal evolved and downgraded “rule of law” to a target, balanced with reference to “equal access to justice for all” in the same line. “Justice” was elevated to the title and the soundness of institutions was spelled out as meaning that

they should be effective, accountable and inclusive. Finally, different targets suggest that same principles should apply to global institutions. Thus, instead of seeing “good governance” as a development issue (implying that countries are poor because they have corrupt governments) this goal becomes universal both in the sense of applying to all countries but also in its application to global governance.

■ The question of inequality

The goal on inequalities was a much debated one and is probably the most innovative and transformative one. Ban Ki-moon framed his proposed action to “tackle exclusion and inequalities” basically as promoting “equality of opportunity” and only recommended national-level solutions: “access to decent employment, legal identification, financial services, infrastructure and social protection, as well as societies where all people can contribute and participate in national and local governance”.

Instead, the OWG changed the title of Goal 10 to read “reduce inequality within and among countries”. It calls to “ensure equal opportunity” and also to “reduce inequalities of outcome” (target 10.3). The goal starts by providing the same indicators and actions suggested by the World Bank (looking at the income of the bottom 40 per cent and having it grow faster than national average) to address domestic inequalities. But the OWG goes further, and in order to address inequalities of outcome, it recommends “eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and actions”, including “fiscal, wage, and social protection policies” (10.3 and 10.4).

While this would progressively achieve greater domestic equality, in order to address global inequalities, the OWG proposes to “improve regulation and monitoring of global financial markets and institutions” and “enhanced representation and voice of developing countries in de-

cision-making in global international economic and financial institutions”, meaning the International Monetary Fund (IMF) and the World Bank (targets 10.5 and 10.6).

The increase in voting power in the Bretton Woods institutions was already debated in the “Finance for Development” Conference of Monterrey in 2002, and the G20 agreed to it in 2010, but US Congress opposition has prevented it from being implemented.

Unregulated finances have been identified in many studies both as a factor of inequalities and an obstacle to development, but so far, developed countries have blocked any participation of the UN in this issue. On September 9 2014, a couple of weeks after the OWG concluding its work the governments demonstrated their commitment to this target by voting at the General Assembly to initiate a process for the creation of a debt workout mechanism with only eleven votes against (the United States, United Kingdom and Germany, followed by Ireland, Finland, Hungary and the Czech Republic). The vast majority of European Union Member States abstained from voting, as did some traditional allies of the US, such as New Zealand. This is not a fully comprehensive regulation of global financial markets, but definitely represents a first step in the right direction.

Finally, “regular and responsible migration and mobility of people” is promoted by target 10.7. The argument that migration would help reduce inequalities was already made by Adam Smith in 1776 in “The Wealth of Nations”:

“(…) the policy of Europe, by obstructing the free circulation of labour and stock, both from employment to employment, and from place to place, occasions, in some cases, a very inconvenient inequality (...)”

and workers suffered more than “stock” (capital) of that inequality because



Women in industrialised countries too still earn less pay than men for doing the same work. On “equal pay day” women – pictured here is US Senator Barbara Mikulski in Washington – draw attention to the gender wage gap.

be and in terms of reminding developed countries of their responsibilities in areas beyond the traditional development cooperation frameworks.

■ Firm commitments or empty promises?

During the preparations of the Rio+20 Summit, twenty-two UN independent human rights rapporteurs wrote a letter to the leaders saying that “real risk exists that commitments made in Rio will remain empty promises without effective monitoring and accountability” (OHCHR, 2012). This is a danger that extends to the Sustainable Development Goals. In the MDG framework, donor countries made recipients of ODA accountable as a condition to get their funding. This leverage is much less powerful now, since countries are less dependent on foreign aid to meet their budgets and the BRICS (Brasil, Russia, India, China, South Africa) offer alternative sources of funding with fewer policy conditionalities.

If the SDGs are to have effective monitoring and review (the word “accountability” has been dropped from the table), developed countries have to take the lead and commit themselves to be reviewed not just by their own citizens (which should be the primary accountability line for every government, rich or poor) but also to some UN mechanism. The High Level Political Forum of the United Nations is the adequate institutional space, and a Universal Periodic Review on sustainable development could be established, taking mechanisms of the Human Rights Council as a model.

This is the challenging extra step that is needed to make the admirable consensus already reached around the SDGs a working reality.

“corporation laws, however, give less obstruction to the free circulation of stock from one place to another, than to that of labour”.

This asymmetry between capital and labour in terms of mobility is as true today as in the 18th century, and the OWG deals with migration both as a potential remedy against inequalities as well as a positive factor in sustainable development – a courageous consensus in a world where this issue has become so politically sensitive in many countries.

■ Common but differentiated responsibilities

In the MDGs it was only Goal 8 that dealt with obligations for developed countries, and these were formulated only in terms of what they would do to support developing countries to reach the other goals. The SDGs are very different, following the Rio mandate for universality and taking into account the Rio principle of “common but differentiated responsibilities”. Developed countries are still required to support the efforts of developing countries, now with some indicators, for example on volume of Official Development Assistance (ODA) in relation to the Gross Domestic Product

(GDP), which were absent in MDG 8. But the SDGs also spell out goals and targets for all countries within their own borders. Meeting the targets of the social pillar commented above would require for many middle and high-income countries to reverse their current austerity policies, which in turn would provide a locomotive for the economic growth needed by Least Developed Countries (LDCs) and other low-income countries to reduce global inequalities.

At the same time, in order for this economic growth not to overburden the planet, target 8.4 requests to “improve progressively through 2030 global resource efficiency in consumption and production, and endeavour to decouple economic growth from environmental degradation (...) with developed countries taking the lead”. This leadership is also requested in Goal 12 on sustainable consumption and production patterns. As with climate (Goal 13), the debate around a definition and targets on sustainable consumption and production is happening elsewhere in the UN and the OWG was careful not to prejudge or interfere with those negotiations. The inclusion of Goals 12 and 13 is still relevant as a signal that these two issues are key in any global articulation of what sustainable development should

Photo: D. Mills/NYT/Redux/lat



In the fight against hunger and malnutrition, the “One World – No Hunger” Initiative focuses on the most vulnerable groups: pregnant women, nursing mothers and young children.

“One World – No Hunger”

A look at the German Development Ministry’s Initiative

With reference to the “One World – No Hunger” Initiative, Stefan Schmitz shows how food policies can support the attainment of the Sustainable Development Goals and highlights the interdependencies between the individual goals and targets.

In 2014, the German Federal Ministry for Economic Cooperation and Development (BMZ) launched its “One World – No Hunger” Initiative, which aims to address some of the greatest challenges facing humankind. More than 800 million people worldwide are still chronically hungry. At least a billion more suffer from hidden hunger – malnutrition caused by a poor diet that is lacking in vital nutrients. In

other words, almost two billion people lack the food they need to lead a healthy and productive life in dignity.

Hunger and poor nutrition kill around 8,000 children each day and are thus the cause of around 50 per cent of all child deaths worldwide. Hunger is the greatest risk to health, claiming more lives each year than AIDS, malaria and tuberculosis combined. It is also a major obstacle to development. It leads to migration and expulsion, conflict and violence, a lack of economic prospects and hopelessness.

No other human right is violated as often as the right to food. This violation of human rights and dignity is one of the greatest scandals of our

modern world. It mainly affects rural regions, home to three quarters of the world’s hungry, where there is a lack of jobs and incomes and poverty is greatest. Very often, a key cause of hunger and malnutrition is not food unavailability but poverty: people cannot afford to buy adequate quantities of healthy food.

Although food insecurity is primarily a structural problem affecting rural regions, it is exacerbated by natural disasters, epidemics, and political crises and conflicts. At least 40 countries are classed as fragile, more than half of them in Africa. While more countries are now finding a way out of hunger through good governance and stable statehood, the number of fragile

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states and violent conflicts is growing. The percentage share of people who are hungry as a result of fragility and conflict is therefore increasing as well.

A modern and professional agricultural sector has a key role to play in combating rural poverty and hunger and building people's resilience to short-term crises. This applies particularly given that the world's population is growing. There is considerable scope to boost agricultural productivity in many parts of the world, and encouragingly, the willingness to invest in agriculture has increased in recent years. It is essential, however, that this investment creates jobs and incomes for those who need them most.

At the same time, there is a risk that further growth in agricultural production and investment will worsen the large-scale environmental degradation already caused by farming. In many parts of the world, agriculture in its present form poses the greatest threat to the environment. It is steadily expanding into the remaining natural areas, driving deforestation and biodiversity loss, and causing depletion of freshwater resources and soil fertility due to inappropriate land management and irrigation.

■ The “One World – No Hunger” Initiative: key goals

In light of the above, the Initiative has two main goals:

- 1) To eradicate hunger and malnutrition: those hungry and malnourished today must gain access to adequate, affordable and healthy food as soon as possible. Here, the Initiative focuses on the most vulnerable groups: pregnant women, nursing mothers and young children.
- 2) To create and maintain the conditions that enable future generations, in a growing world population, to access adequate, affordable and healthy food. Agriculture everywhere must involve sustainable production, based on ecologically sound and socially equitable investment.

These goals are within reach, but all stakeholders must play their part. Political commitment, good governance, adequate public investment and an enabling environment for private investment in the countries concerned are prerequisites. Donors should make a contribution by supporting these national efforts, and the international community must ensure that global standards, rules and development strategies support action to eradicate hunger and malnutrition, rather than obstructing the attainment of these goals.

■ The Initiative and the Sustainable Development Goals

The main purpose of the “One World – No Hunger” Initiative is to support the Sustainable Development Goals (SDGs) proposed by the inter-governmental Open Working Group (OWG). SDG 2 is directly relevant to the Special Initiative: End hunger, achieve food security and improved nutrition and promote sustainable agriculture. However, the Initiative – through its broad-based approach – also takes account of the linkage between the various SDGs. The right measures can support the attainment of many of the SDGs through various impact chains.

Efforts to promote health (SDG 3) are often needed to eradicate malnutrition, as it is essential to combat diseases such as diarrhoea, especially in children, in order to improve their nutritional status. Similarly, education (SDG 4), gender equality (SDG 5), the availability and sustainable management of water and sanitation (SDG 6) and access to modern energy (SDG 7) all positively impact on food and nutrition. Access to energy, along with a resilient infrastructure (SDG 9), is a prerequisite in developing a modern system of agriculture as the basis of food security. Providing secure access to land (part of Goal 1) and reducing harvest losses and food waste (part of SDG 12) can also do much to improve access and availability.

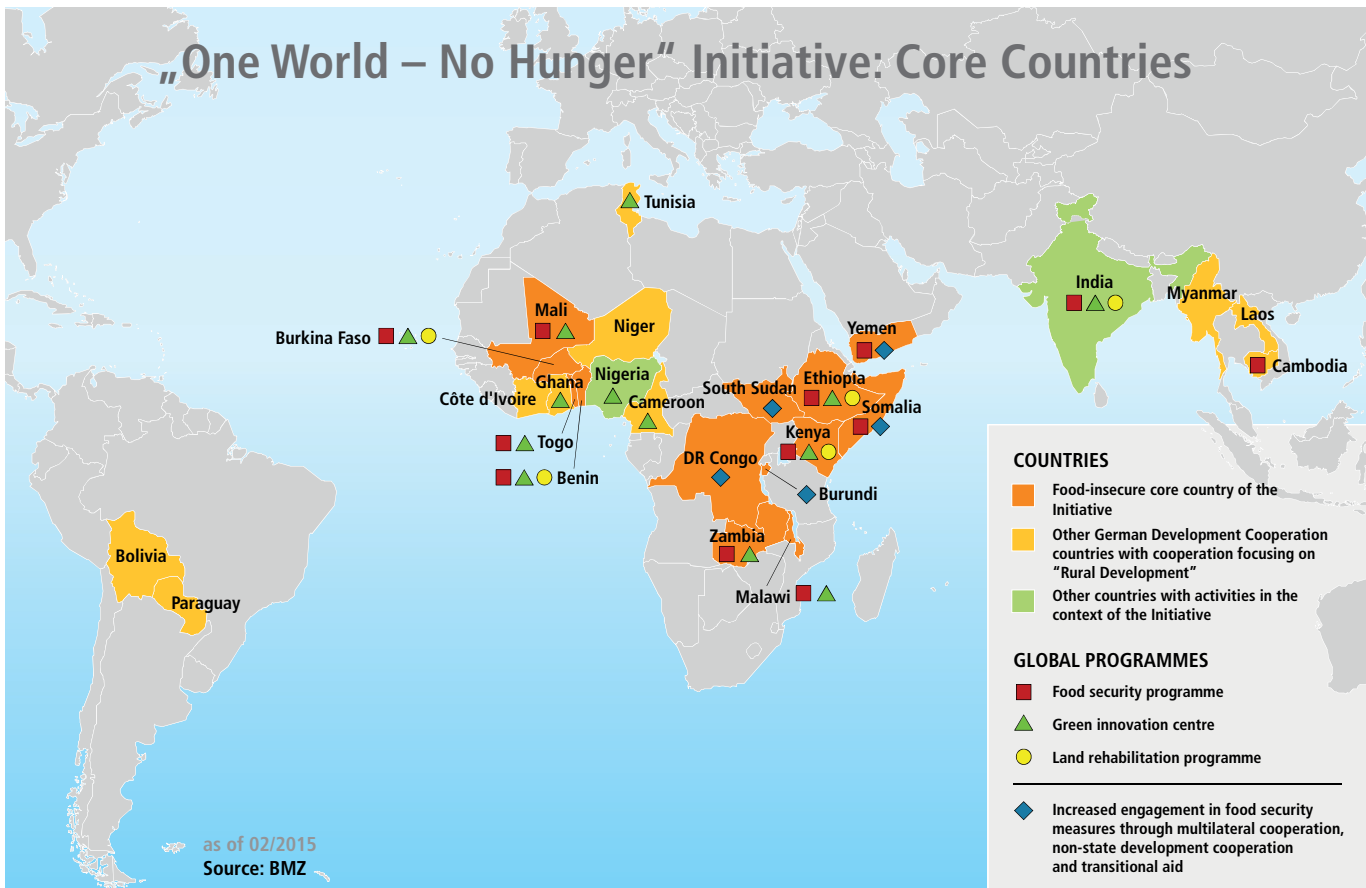
Food security for present generations is a core issue, but it should not be achieved at future generations' expense. Establishing the conditions necessary to safeguard food security for the future is therefore one of the Initiative's two main goals. It is also in line with two of the SDGs: Conserve and sustainably use the oceans, seas and marine resources (SDG 14) as the basis for a sustainable supply of food from the sea, and protect, restore and promote sustainable use of terrestrial ecosystems (SDG 15). In the latter case, SDG 15 makes specific reference to the need to combat desertification, halt and reverse land degradation, and end biodiversity loss. Ultimately, however, future food security will largely depend on agriculture's capacity to adapt to climate change. Keeping global temperature rise within manageable limits will greatly increase the agriculture sector's capacity to meet this challenge and thus reduce the risk of food insecurity for future generations. So in order to permanently eradicate hunger and malnutrition, urgent action to combat climate change is vital (SDG 13).

The Initiative's multi-sectoral approach responds to this challenge. Many measures across a range of areas are needed to safeguard food security for present and future generations. At the same time, eradicating hunger and malnutrition – which is the Initiative's main objective – will support the attainment of many other goals. People who are no longer hungry are better able to lift themselves out of poverty (SDG 1), live a healthy life (SDG 3), access learning and education (SDG 4) and build peaceful and inclusive societies (SDG 16).

■ The Initiative's six fields of action

1) Food security

Food insecurity is a complex challenge, particularly affecting women, mothers and infants. All four pillars of food security – access, availability, use and stability – must be safeguarded. Causes of food insecurity vary from region to region but cultural factors,



lack of nutritional awareness, poor hygiene and an absence of health services often play a key role.

The measures needed are therefore equally complex and must focus not only on food but also on water, hygiene and sanitation, health care, nutritional awareness and social security. Our integrated food security measures which form part of the Initiative therefore aim to improve the nutritional status of pregnant women, mothers and young children, who will gain access not merely to adequate calories but to the healthy and nutritious food that is essential for their physical and mental wellbeing. This type of action to eradicate structural hunger and malnutrition among mothers and infants is one of the most effective forms of investment in the future.

2) Resilience and food security in crises and conflicts

Food insecurity is one of the most serious consequences of economic crises, natural disasters and conflicts. We provide transitional aid in order to improve food security in crisis settings

and during reconstruction. Located at the interface between humanitarian assistance and development, transitional aid links short-, medium- and long-term measures with the aim of building capacities and resilience of individuals, communities, civil society and the public sector to crises and future shocks, initiating and supporting change processes, and thus creating prospects for the future.

3) Innovation in agriculture and food production

In this field of action, our main priority is to establish "green innovation centres". A modern and professional agricultural sector has a crucial role to play in combating rural poverty and hunger. Innovation, rather than increased use of inputs, is now the main driver of productivity increases in agriculture, even in developing countries, and this positive trend must continue. Technical and institutional innovation must therefore be promoted so that it becomes an enabler of sustainable development. In order to boost agricultural productivity, upstream and downstream sectors all along the

value chain (harvesting methods, storage, transport, processing) must be developed and expanded. This will require more intensive research, training, agricultural extension, access to capital, appropriate technologies, and institutional reform. Green innovation centres therefore support development at every stage of agricultural and food production – from field to fork.

We are not advocates for industrialised agriculture. Instead, we support the development of a modern and professional farm sector, guided by the vision of sustainable agriculture based firmly around rural farming communities. We offer poor smallholder families the prospect of switching to market-based production, empowering them to move beyond subsistence farming, with its high risk of poverty and hunger. A productive food and agricultural sector creates jobs and incomes in rural regions, reduces developing countries' vulnerability to world market prices, and guarantees that food remains affordable for low-income groups in rural and urban areas alike.

4) Towards a dynamic transition of rural regions

Rural poverty and hunger can only be eradicated if rural regions gain access to expanding urban markets. At the same time, as much wealth as possible must be generated and retained in rural regions. However, rural regions can only utilise the opportunities afforded by urbanisation if efforts to promote agriculture and food production are embedded in a comprehensive rural development strategy. Rural transition is required, based on social and environmental principles, in order to end the dominance of farming and support diversification of the labour market. It is important to develop agricultural and non-agricultural markets that support income generation, the accumulation of savings, and higher levels of social security and investment.

However, if well-performing markets and private investment are to improve quality of life and create a healthier economy in rural regions, the right conditions must be in place: schools and vocational training facilities, health centres, an energy supply, water and sanitation, and a good road network. Although some of these services can be delivered by the private sector with effective regulation by the state, they are, in essence, public services, which we promote via our regular development programmes.

Voluntary organisations and self-help are also important in stimulating the rural economy. We build the capacities of civil society, such as producer, consumer and worker organisations that guarantee fair access to markets, decent working conditions, and participation in local decision-making. Voluntary organisations give stakeholders a voice and ensure that local knowledge can be utilised in problem-solving. In this way, through our broad-based approach to rural development, we also support marginalised groups.

5) Sustainable resource management in rural regions

In many parts of the world, agriculture causes deforestation and biodi-

versity loss, depletes water resources and massively reduces soil fertility. Through our programmes, we support sustainable agricultural development and responsible use of rural resources.

Land is the basis of all forms of farming and is the important production factor overall. However, it is under threat all over the world. In this field of action, we therefore focus on protecting soil and rehabilitating degraded land – aspects which have hitherto been neglected in development policy. Efforts to increase agricultural production will only be successful in the long term if land degradation and the rapid loss of soil fertility are halted and reversed.

6) Responsible land rights

However, protecting nature resources and managing them sustainably is not enough. People also need equitable, sustainable and secure access to these resources. In many regions, insecure land tenure is a key cause of rural communities' inability to feed themselves or invest in the land. Secure access to land and other natural resources is essential to empower many smallholder farmers to lift themselves out of poverty and feed themselves. In many countries, legislation on land ownership and inheritance discriminates actively against women. We are working to improve land tenure worldwide, especially for women, smallholders and marginalised groups. This includes promoting responsible investment in land, based on respect for the rights of smallholder families and indigenous communities.

■ Regional focus

Sub-Saharan Africa is the region with the highest prevalence of hunger and malnutrition and the greatest food security challenges. In contrast to the global trend, the number of hungry people in Africa is increasing. The Initiative therefore focuses primarily on Africa. In order to maximise effectiveness, we have identified food-insecure core countries where most of the Initiative's actions and resources will be targeted. However, this does

Six guiding principles

- 1) Promote a sustainable and equitable market economy
- 2) Fulfil global responsibility
- 3) Deliver the right to food
- 4) Make gender equality a reality
- 5) Aim for effectiveness, economic viability and transparency
- 6) Promote partner country ownership and input

Six practical steps

- 1) Improve the strategic focus
- 2) Expand bilateral cooperation
- 3) Develop and contribute to global programmes and initiatives
- 4) Form partnerships with business, the scientific community and civil society
- 5) Promote development policy dialogue
- 6) Increase financial engagement

not preclude engagement in other countries, if appropriate.

The priorities pursued in the various fields of action (1-6 above) differ from country to country. The key factors determining the choice of country-specific measures are: partner country interests, scope to build on existing German development programmes, and prospects of success. On this basis, a decision was taken to initiate the following measures:

- Integrated food security programmes (fields of action 1 and 2) in 12 countries: Benin, Burkina Faso, Cambodia, Ethiopia, India, Kenya, Malawi, Mali, Somalia/Somaliland, Togo, Yemen and Zambia.
- Promoting innovation in agriculture and food production through the establishment of "green innovation centres" (field of action 3) in 13 countries: Benin, Burkina Faso, Cameroon, Ethiopia, Ghana, India, Kenya, Malawi, Mali, Nigeria, Togo, Tunisia and Zambia.
- Land rehabilitation programmes (field of action 5) in five countries: Benin, Burkina Faso, Ethiopia, India and Kenya.

SDGs: Better process, worse outcome

Meant well doesn't always mean done well. The Sustainable Development Goals are all set to undermine themselves, Stephan Klasen maintains. The worst aspect is that people, who really ought to be at the focus, threaten to fall by the wayside in this technocratic maze of hundreds of goals, targets, and indicators.

This year marks the end of the Millennium Development Goals (MDGs) and will likely be the year where the Sustainable Development Goals (SDGs), meant to shape the global agenda until 2030, will be concluded. The MDGs have left a sizable mark on the global development agenda. In particular, they helped to galvanise global action around addressing the worst aspects of human deprivation, including disease and mortality, lack of education and abject poverty. This, together with their being limited in number, was key to the success of the MDGs. Particularly the first seven goals rightly focused on central development outcomes and on people and the lives they aspire to live (with the 8th goal detailing some means to achieving these outcomes). They were linked closely to the capability approach and the associated concepts of human development and multidimensional poverty of the Indian economist and philosopher Amartya Sen. Remarkably, many more MDG targets will be reached this year than seemed conceivable five or ten years ago. However, the process of how the MDGs were developed was widely seen as problematic. While they had been based on the outcome documents of the UN conferences of the 1990s, this goal system was first developed at the Organisation for Economic Co-operation and Development's Development Assistance Committee – OECD-DAC and then adapted in 2000 without much further discussion and negotiation by the UN to become the MDGs.

To improve this, a much broader and inclusive process was adopted. It included several work streams from within the UN system, the non-governmental Sustainable Development Solutions Network, and a High-Level Panel broadly representing the world's political leadership, all being brought together by the Open Working Group of the General Assembly which also merged the post-2015 development agenda with the sustainability agenda emanating from the Rio process. Remarkably, this large process is now on track to produce a set of SDGs with targets and indicators by the deadline of this September.



While the process has been much improved, how is the outcome? The SDGs to be generat-

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ed by this process were, to quote from the relevant General Assembly (GA) resolution, supposed to be "action-oriented, concise and easy to communicate, limited in number, aspirational, global in nature and universally applicable to all countries, while taking into account different national realities, capacities and levels of development and respecting national policies and priorities". What we got instead is an explosion of goals and targets of dubious merit. From 8 goals and initially 18 targets for the MDGs, the Open Working Group for the SDGs have proposed 17 goals and associated 169 targets. Where there were 48 indicators to monitor the MDGs, people at the UN Statistical Commission estimate that there will need to be around 1,000 (!) indicators to monitor progress towards the SDGs; and they are now charged with the thankless task of devising this list.

■ Randomness instead of clear priorities

What's wrong with that? After all, isn't it right that the SDGs reflect the many dimensions relevant to development and improvements in the human condition? I argue there is plenty wrong with such an exploded goals-targets-indicators system. First, it was hard enough for many poor countries and small agencies to track progress in the MDG system. Data was scarce, capacity is limited, and funds are tight. Now countries are supposed to track 1,000 indicators to help them assess whether they are making progress towards the 169 targets. This is mission impossible for all but the most sophisticated and well-endowed statistical systems in the world. Second, assessing the results of all this mass of data is similarly impossible. Do I just count to assess whether a country is making more progress than another? Does making progress in 379 indicators beat making progress in 377? Does it matter which indicators are included? And who is able to communicate these results in a meaningful way to the public? Closely related to this is a third problem: The SDGs have lost all sense of priorities. Now reducing child mortality is just as much a target as improving the recycling of water. Eliminating abject income poverty is just as important as promoting regional and national development planning or improved public procurement practices.

Fourth, there is also plenty of intellectual confusion. In particular, now some targets are ends (such as improving education, reducing undernutrition or poverty), while others are means which may or may not lead to desirable ends in terms of human well-being. By placing them all on the same level, we risk focusing our attention on means

The greatest strength of the MDGs was their focus on people and their deprivations. Our author maintains that the SDGs lack this focus.

rather than ends. For example, reducing maternal mortality to below 70 per 100,000 is a crucial well-being outcome. Improving the information on food markets and food reserves is hardly an end in itself but might have an impact on availability of food and hunger in some circumstances. But both are now treated as targets with equal standing in the new SDG system. Putting means and ends on the same level is a serious step backwards from the human development paradigm or Sen's capability approach both of which firmly focus on well-being outcomes as the key focus of our attention. Absurdly, after slowly realising that high economic growth is neither a necessary nor sufficient means of overcoming most deprivations, the SDGs now also include seven per cent economic growth as a target for least-developed countries. One only needs to look at Equatorial Guinea, a least-developed country that has achieved such high economic growth in recent years with little improvement in human development to show for it. Growth may be an important means to overcome deprivations in many contexts, but it is the deprivations we should focus on. Moreover, there are many means to achieve these crucial well-being outcomes. As we also often hear in the corridors in New York, there is no 'one size that fits all', whereas listing some means as done in the SDGs suggests precisely that there is one blueprint for development.

■ Where do people come in?

Lastly, what is lost in all this mess is the human beings whose deprivation ought to be at the centre of attention. We are now in a technocratic maze of indicators, targets and goals, many of which have nothing to do with people. For example, doubling the rate of improvement of energy efficiency is likely to be a good thing, but how will it concretely improve the lives of deprived populations? Neither is there anything wrong with sustainable local tourism, but again no connection to the lives of deprived people is made. Enhancing scientific capacities is also definitely desirable, but will it invariably lead to improved lives for the deprived? The greatest strength of the MDGs, its focus on people and their deprivations, is totally lost here.

How could this explosion of goals and targets come about? As I already outlined in more detail in 2012 (see Klasen, 2012), one risk of the SDG process was that it opened the door to lobbying and special pleading from all quarters, ranging from specialised UN agencies who want their pet concern be reflected to specialised NGOs who also want the SDGs to push their agenda. And then of course there are the many actors involved, including donors, academics, national governments, civil society, all having bright ideas about suitable goals and targets. Rather than committing right from the start to a very low number of goals and targets (as called



Photo: FAO/A. Proto

for in the General Assembly resolution), the High-Level Panel and, even more so, the Open Working Group took the easy way out and just allowed goals and targets to proliferate. This way everyone could get accommodated at apparently no cost. And once this merry process of adding ever more goals and targets got under way, there was no way to stop it. After all, how can you deny the wish to add another target if you have already allowed targets to accumulate?

■ What now?

Is there yet a way to channel this madness into something useful? It seems politically difficult now to abandon the outcome of the Open Working Group. And indeed it is nearly impossible now to reduce the number of goals and targets to a manageable number, without restarting the entire process from scratch. But there is one potential way out. It is now widely recognised within the UN system that SDGs with 1,000+ indicators just won't fly. So they are looking for ways to develop a core set of indicators that would be able to reflect the most important aspects of the SDGs in just a few indicators. I would propose that the core set of indicators be no more than ten indicators and focus directly on the most egregious deprivations that humans suffer and that we want to banish from the planet. This way the SDG process would give the world what it needs and wanted, and what the GA resolution intended: SDGs that are "action-oriented, concise and easy to communicate, limited in number, and aspirational". Behind these headline numbers, let the cognoscenti that created this SDG mess then spend the next 15 years devising ways to optimise policy-making in 169-dimensional space.

For references and further reading, see: ► www.rural21.com

Nature as a commodity, or: Does nature have a value?

Two viewpoints on a current debate

Is it right to attach financial values to nature and to incorporate that valuation into the post-2015 agenda? Will such valuation help to protect species diversity and ecosystems? Or does it not rather harbour the risk that we cheerfully go on destroying nature since other aspects of the national accounts can be seen as compensation? Civil society is split on this issue. Our author points out why.

If we take the sustainability targets of the planned post-2015 agenda seriously and think of them as more than a series of isolated and unconnected objectives, the logical consequence is that we need to change our understanding of development accordingly: in place of the economy of overexploitation, which enthusiastically consumes natural resources – “natural capital” – as quickly as possible in the name of “economic growth”, we need to move towards a sustainable economy which conserves “natural capital” instead of consuming it. Governments are reluctant to take such decisions, except perhaps when they have no intention of following through on the consequences. Therefore it is to be welcomed in principle that the report of the Open Working Group on the post-2015 development agenda (point 15.9) reinforces the Aichi target of the Biodiversity Convention: by 2020, integrate ecosystems and biodiversity values into national and local planning, development processes and poverty reduction strategies, and accounts.

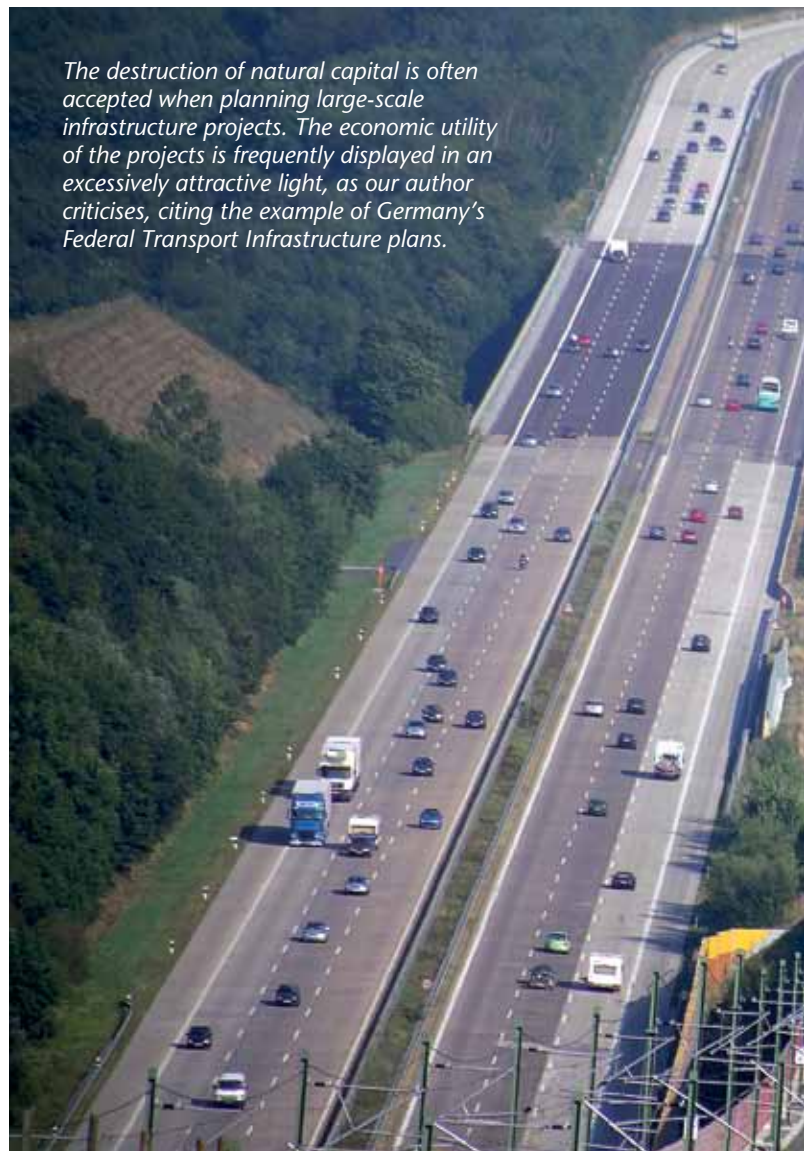
The “Report of the Intergovernmental Committee of Experts on Sustainable Development Financing”, which deals with the financing of the planned post-2015 agenda, states the point more clearly still: “Environmental accounting, which incorporates environmentally relevant financial flows and accounts on the use of natural resources, is another mechanism that can help policymakers internalise externalities. GDP is a crucial measure that governments use to assess the economic performance of countries, but by not incorporating natural capital, it can lead governments to ignore an inefficient allocation

of investment. The System of Environmental-Economic Accounting (SEEA) could facilitate greater public investment in sustainable development.” (UN 2014: 77)

The destruction of natural capital is often accepted when planning large-scale infrastructure projects. The economic utility of the projects is frequently displayed in an excessively attractive light, as our author criticises, citing the example of Germany’s Federal Transport Infrastructure plans.



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So the magic phrase “internalising external costs” is mentioned in this text, and rightly so. Internalisation of externalities is an age-old demand of the environmental movement and is important as a means of addressing the past policy of overexploitation. In order to justify labelling it as a policy of overexploitation, we need to be able to quantify – i.e. calculate – these external costs, or at least make the attempt. If that leads to a more multifaceted concept of development and to an understanding that some development is destructive development, that is certainly a good thing.

■ Costs known, problem eliminated?

Nevertheless this approach is very contentious in the public sphere and among non-governmental organisations. Inspired by the findings of the studies by the former World Bank Chief Economist, Nicholas Stern, that climate change is more expensive than its mitigation, an international team of researchers led by the Deutsche Bank Manager, Pavan Sukhdev, presented the study “The Economics

of Ecosystems and Biodiversity” (TEEB), aimed at making the economic value of ecosystems services and biodiversity measurable so as to better protect them from destruction and exploitation.

The idea was to use these studies by renowned bankers to impress upon resistant politicians that climate change mitigation, biodiversity conservation and environmental protection are not cost factors; on the contrary, they make economic sense. But has this approach really worked? Previously the vast majority of governments lacked the political will to make development sustainable. Has anything substantial changed in the meantime? I see no sign of it. Have politicians, in fact, ever taken their lead from the actual economic payoff of their policy in the national accounts? If that were the case, then we would never have started subsidising German coal mining or agro-industrial structures; we would long have stopped building new motorways or largely unused regional airports in Germany. To confirm this we only need to read the reports of the audit offices. In political reality, however, the economic pointlessness of a policy has never been a good enough reason to change it.

Decision-makers will still make decisions to the detriment of ecosystems even with full knowledge of the value. How often have decisions been made in the past to destroy natural capital, even though the implications were perfectly clear? If the worst comes to the worst, calculation methods are simply manipulated. There is no need to go to Congo or Brazil for evidence of that. If we take a look at Germany’s “Federal Transport Infrastructure Plans”, which are the federal trunk road plans passed by the Bundestag, we very soon realise that for decades, hair-raising calculation methods have been used to argue for the economic utility of road projects, although any halfway clear-thinking person can immediately see the manipulations that are going on.

For that reason I am not so sure whether WWF is right when it says: “A key reason why biodiversity loss and ecosystem degradation is escalating is that the value of their services is largely invisible to decision-makers in business and government. We need to calculate the value of natural capital because we cannot manage what is not measured.” (WWF, 2014)

■ The other side of the coin

The attempt to assign an economic value to nature is also much criticised. If as a simultaneous consequence of an economic valuation of nature a price is set for the use or destruction of nature, thereby integrating the usage rights into the market, one has already succumbed to an ethically dubious logic, according to many critics. Nature is a public good. By subjecting it to economic valuation, however, property and usage rights are implicitly assigned. Far from being shielded from the logic of markets and utilisation, nature is actively subsumed into this logic by such approaches.



Photo: Bilderbox.com

The critics are right to some extent: of course, there are certain approaches which crudely consider nature as no more than a monetised production factor – essentially with the intention of carrying on as usual for as long as possible while somehow internalising or managing the limiting constraints of the Earth’s ecosystem – but without thought of accepting the limits to growth. Naturally there are also attempts to bring neoliberal market ideology into nature conservation and environmental protection, with rather disappointing results in the meantime. For evidence we only need look at emissions trading and related instruments like REDD (Reducing Emissions from Deforestation and Forest Degradation), which even after 15 years in operation have still not prevented or saved a single ton of CO₂. Instead they have pumped vast amounts of additional tons of CO₂ into the air because these ineffective market instruments blocked effective political solutions. It is no coincidence that industry and politics sing the praises of ineffective emissions trading but are phasing out the German Renewable Energy Act, for example, precisely because it has done far more to mitigate climate change and cut down on fossil fuels.

But not all advocates of such instruments have the same intention as the Federation of German Industries (BDI). WWF says: Ecosystem accounting is a tool that can significantly help to make better decisions on natural capital. I think that is true. Theoretically at least. In the end, though, it depends on the people making these decisions. It is not as if they don’t know how to protect nature. They just don’t want to.

■ Is the national economy sufficient as a yardstick?

Therefore I am not so sure what we ultimately stand to gain from an “alternative measure of welfare”. Perhaps the credence we give to indexes is one of our problems. From gross national product (GNP) to the Human Development Index (HDI) or even the Gross National Happiness (GNH) index or others, in the end is it not all just a subjective selection of data, which is used to create an aura of objectivity that does not really exist?

Perhaps life is simply too multifaceted to pack everything into one index. I don’t know whether such indexes are really needed for better policy, or whether this credence in indexes is actually part of the problem. As to whether it is worth slaving away critically to improve these indices – that I find even more questionable. We did not fight nuclear power and genetic engineering by means of indexes, but by good campaigning and by mobilising people who thought that intact natural systems and their own health were more important than the DAX, the GNP or the profits of faceless corporations. The environmental movement succeeded because people were defending what they cared about. Not because they corrected the cost-benefit calculations, but because they were fiercely determined to stop the project, however useful it might have been economically. They were

convinced of their particular interest, and quite rightly, just as the opposing side was convinced of its particular interests. And that is why they won. They wanted to save their country and not sacrifice it for the profits of others; when it came to the crunch, not even for the supposed good of the national economy. I agree with them.

But if some new index should help to shatter the ideology of GNP growth, I would have no objection. The question, then, is whether it boosts the power of the environmentalists if the value of ecosystem services is incorporated into political decisions, and if so, how. This question can be answered globally and locally.

■ Aid to argumentation

On the global level, there are certainly many countries where even just some first, tentative steps in the direction of broader-based economic planning processes will be very worthwhile. The post-2015 agenda can contribute to this, and I think it will help our colleagues in these countries, who are not unusually branded as “opponents of development” when they defend their environment. Using the post-2015 agenda they can do something; they can more effectively question the economic assertions of their governments.

The same applies in Europe. The EU Commission once calculated that non-implementation of European environmental policy was costing around EUR 50 billion a year. This is a little-known fact, which is definitively worth using to strengthen arguments whenever voices begin to clamour once again for environmental deregulation in order to stimulate more growth. What does the failed European agricultural policy cost the community every year? I don’t know, either. But whenever we want to make changes to it, the agricultural lobby immediately complains about the costs of those changes, as if they were costs to the community.

Even if our commitment is motivated by our desire to protect nature for the sake of its intrinsic value, and we would protect it even if natural capital had zero economic value: many disputes might have different outcomes if the environmental movement could demonstrate the economic irrationality of projects like the English-French Channel Tunnel between Dover and Calais or the JadeWeserPort on Germany’s North Sea coast – where an average of just one ship per week ever docks – and do so in such a way that unquestioned arguments about growth and jobs no longer have such traction over public opinion.

As so often, in the debate about the “value of nature” what matters is how this debate is conducted, who defines it, and who dominates it when it comes to political altercations. Precisely this ambivalence stands in the way of a clear answer to the question asked at the outset.

For references and further reading, see: ► www.rural21.com

Fitter and healthier with traditional varieties

In Kenya, smallholders are improving the health of their families by growing local cereal varieties and indigenous vegetables. The use of traditional foods is even helping people with HIV/AIDS.

Most traditional vegetable varieties are rich in vitamins and provide a sound basis for a balanced diet.

It is not only acute hunger that kills people. Poor nutrition can also result in potentially fatal conditions such as diabetes and high blood pressure. Malnutrition or “hidden hunger” causes permanent damage to the organism. A third of the world’s population obtains a more or less sufficient caloric intake from a diet consisting predominantly of three staple foods – rice, maize or wheat – but is deficient in vitamins, minerals, trace elements, essential fatty acids and amino acids.

A balanced diet, by contrast, lays the foundation for lasting good health – and hence development: it is only when people are consistently well that they have sufficient energy. “If a smallholder is not in good health, the productivity of his farm declines, which in turn has an adverse impact on the entire family’s food situation”, says Listone Ayodi of the Rural Service Programme (RSP), a Kenyan NGO. “It is the children in particular who suffer as a result of malnutrition”, Ayodi continues. It weakens them and makes them vulnerable to disease. They cannot keep up at school because they lack energy and have difficulty concentrating. In the immediate post-natal period malnutrition has particularly seri-



Photo: J. Boethling

ous consequences. “It can hinder the child’s entire development for a very long time.”

Listone Ayodi is hoping to change this with the help of traditional cereal and vegetable varieties. “The old varieties are very rich in nutrients.” With the support of the German organisation Brot für die Welt (Bread for the World), the RSP is distributing suitable seed in the project region in the mountains above Lake Victoria. The organisation is also teaching the smallholders about sustainable farming techniques and the right way to prepare the rediscovered foods.

Malnutrition is now a thing of the past for the three children of Mable Kagesha and Christopher Itayi from the village of Budira. When they come out of school at midday, they are ravenously hungry. “It feels good to be able to offer them such lavish food”, says Mable Kagesha. On the table are

dishes of puréed plantain with fresh groundnuts, sweet potatoes, beans, maize cobs and a variety of leaf vegetables. The 35-year-old mother fills cups with a porridge of sorghum and millet from a canister. The children tuck into the food with enthusiasm. There was plenty on the table in the morning before they went to school, and there will be more after afternoon lessons to bridge the gap until supper – “they are growing.” The family has not always been able to eat like this. “We didn’t grow the range of things that is now enabling us all to thrive so well.” Christopher Itayi grins and sips at his cup of porridge. Years of toil under the equatorial sun have left their mark on him. His sinewy muscles tauten with every movement. The 38-year-old has worked in the fields almost all his life – first for his father and now on his own land. But his family’s change of diet has made a crucial difference: “I now have much more energy; I can work longer and harder.”

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■ Diversity returns

The people here used to grow local varieties. But in the 1970s, encouraged by major government campaigns, they started to plant more monocultures of hybrid seeds. The anticipated high yields did not materialise. Instead they had to pay out more for seed, chemical fertilisers and pesticides. Moreover, the maize that was widely grown did not contain enough nutrients on its own. Today, awareness of the health benefits and economic value of local varieties is increasing. On the farms, a wide variety of crops is flourishing again. To walk round Christopher Itayi's field behind the family's mud house is like touring a botanical garden. Sorghum, millet, groundnuts, amaranth, local bananas, various beans, lentils and potatoes grow in the red earth. There are also many types of cabbage, squash and spinach, as well as leaf vegetables whose value as a source of food is largely unknown in Europe. Zukuma, the local cabbage, is rich in vitamin A and calcium. Varieties of black nightshade and green lily contain many vitamins, minerals and trace elements. The African mito, a fine-leaved wild and cultivated plant, is a good source of vitamin A and beta-carotene. The leaves of the cowpea and the squash plant are also very nutritious. And West African sorrel encourages milk production in nursing mothers.

*Christopher Itayi
harvesting groundnuts
on one of his fields.*

Photo: J. Boethling



■ Food, medicine, fertiliser

Some of the native leaf vegetables contain therapeutic substances that are used in traditional medicine, for example to promote blood formation, relieve pain or reduce inflammation. As part of a balanced diet, indigenous plants can help tackle high blood pressure, diabetes, heart disease and elephantiasis, a widespread disorder involving abnormal swelling of part of the body as a result of lymphoedema.

Traditional cereals such as amaranth and sorghum, a type of millet, are also rich sources of nutrients, especially proteins and essential amino acids, carbohydrates that can be readily utilised and metabolised by humans, and unsaturated fatty acids. In addition, sorghum contains fluorine, sulphur, phosphorus, magnesium and potassium and is also a good source of silicic acid and iron. And it is gluten-free. There are also a number of traditional fertiliser crops that can contribute to a healthy diet as well as improve soil quality. This part of Kenya is very densely populated. The project area has around 1,200 inhabitants per square kilometre – a density rivalling that of Bangladesh. Resources are becoming increasingly scarce: there is virtually no forest left and the soil is depleted. It is essential that the fields

are managed as productively as possible and that soil fertility is maintained.

The RSP supplies smallholders with seed that is suitable for collecting for future production after the first crop. The organisation distributes nutritious plants that also fertilise the soil; it shows people how to make and use compost and how they can utilise mixed cropping and crop rotation not only to improve the soil but also to diversify their diet. For example, banana trees provide shade for plants and soil, prevent erosion and feed the family. Some local plantain varieties are both very easy to grow and heavy cropping. A plant can bear fruit for up to thirty years. The bananas are rich in protein, vitamins and minerals. However, many inhabitants of the region are no longer familiar with these varieties.

■ Deficiency symptoms are a thing of the past

Christopher Itayi's land is less than half the size of a football pitch. In accordance with local custom, his inheritance from his father had to be shared with his brothers. This practice results in ever-smaller plots that make it increasingly difficult for the owners to feed themselves. Despite this, the produce of Christopher Itayi's land now feeds his entire family, including his sister, who has a mental disability, and his 76-year-old mother. "We used to have to go without one meal a day, because we didn't have enough food to go round", the farmer recalls. In the attempt to feed his family, he had to work as a day labourer on other farms. But even when they had enough to eat, they were all affected by deficiency symptoms – especially the children. "They were constantly scratching; they had scabs on their skin, suffered from headaches and diarrhoea and were pale and tired because of anaemia", recounts Mable

Kagesha. At school they were unable to concentrate. Their growth and development was also retarded: they were late smiling, sitting, crawling and recognising other people. All these developmental steps are delayed if a baby or toddler is malnourished. The consequences can still affect people as adults. Now Mable Kagesha's three children are very rarely ill. "They are among the best in their school." The mother's eyes light up. "And when I take them to town for their routine examinations, the doctors nod with satisfaction."

Her own health has improved too. When Mable Kagesha was pregnant with her last child, she felt far stronger than in her previous pregnancies. After the birth, a careful diet that included spinach, amaranth and squash leaves enabled her to replace the blood that she had lost more quickly. "And while I was breastfeeding I always had enough milk."

Her mother-in-law is also feeling better. 76-year-old Gladies Emenza is squatting in the shadow of the hut, leaning against the cracked mud wall and enjoying the light breeze that wafts over the property. Gladies Emenza has diabetes and high blood pressure. In the afternoons she always used to feel very unwell: she could scarcely walk and spoke only haltingly. Now her health problems are kept in check simply by means of a balanced diet.

Malnutrition is now a thing of the past for Mable Kagesha, Christopher Itayi and their three children.

■ New hope for HIV/AIDS patients

A healthy diet based on local varieties is even helping the many people in the project region affected by HIV/AIDS. The prevalence rate here is the second highest in Kenya. Around half of all deaths are attributable to HIV/AIDS. Fortunately the death rate has fallen now that antiretroviral drugs are distributed free of charge. However, people with AIDS still need to stabilise their health and find ways of dealing with the side effects of the drugs.

Agatha Mwavishi has achieved this by improving her diet with the help of traditional foods that she grows on her small plot of land. As a result, her health is now good. But as the 46-year-old sits at the table in her mud hut and tells her story, she turns her gaze inwards. "When the test came back positive, I felt numb." She wrings her hands and speaks very quietly. When her husband died of an AIDS-related illness, his family held her responsible. Instead of supporting the widow and her four children, they barricaded the paths to her small house, drove visitors away, stirred up the villagers against her and openly wished her dead. Here in western Kenya a woman moves to her husband's village. Her own family is often far away.

Then the widow fell ill herself and was tested. "I had always felt safe from HIV." Agatha Mwavishi pauses for a moment. "My husband had never told me that he was infected."

Fortunately the RSP workers started to look after her. They persuaded the village headman to curb the activities of her husband's family and agree to a new path to her house. Then Agatha Mwavishi joined a self-help group for HIV-positive people in the village. "We share our feelings and support each other." For the first time, the slightly built widow looks up again. Her glance ranges over the small room, taking in her youngest daughter's soft toy and the older daughter's teenager posters on the mud wall. The group also provides practical help. When people are ill, members help each other with housework, look after the children, feed the hens and rabbits or tend the vegetable garden.

Her vegetable garden is a source of great security for Agatha Mwavishi and her children. "Our diet is now nutritious and varied, and the children are fit and energetic." She is pleased by this – especially for her youngest child, who is also HIV positive.

Mother and daughter both suffer some side effects from the antiretroviral drugs. Their improved diet boosts their immune systems. Some foods such as amaranth even promote the formation of T helper cells, which prevent AIDS-defining illnesses.

With the drugs and the new diet, Agatha Mwavishi has first stabilised and then increased the number of T helper cells in her blood. "That's good." Agatha Mwavishi nods, as if needing to reassure herself of this. "But the most important thing is that the children are well." And they are – thanks to the healthy diet that despite all obstacles she is able to offer them.



Photo: J. Boethling

Simple technology, big impact

More than 30 years ago, the Swiss Agency for Development and Cooperation (SDC) started a post-harvest programme in Central America named “Postcosecha”. The significant impact that was still evident long after the project end also continues to exist after the cessation of external support. The current priority in SDC’s contribution to post-harvest management (PHM) is to use existing knowledge and experience to create conditions for scaling up the most appropriate PHM technologies in sub-Saharan Africa.

The “Postcosecha” project, launched by the Swiss Agency for Development and Cooperation (SDC) in 1983, was designed to protect small farmers from post-harvest losses and lead to greater food security for the families. “Postcosecha” is Spanish for post-harvest. At the heart of the project is a “menu” of four different technologies for reducing post-harvest losses. The most popular technology turned out to be a simple, hermetic metal grain silo, fabricated by local artisans, that protects dried corn and beans from insects, mice and rats, as well as against decomposition – in a cost-effective way by means of fumigation or oxygen depletion without chemical by-products. The silos and three other technologies were selected for market entry after several years of evaluating smallholder demand in rural Honduras. In particular, the silos spread like mushrooms in Honduras, then Guatemala (the region’s most populated country) and finally Nicaragua and El Salvador, totalling a number of 670,000 in 2009. Assuming a service life of at least 15 years, one can expect to find a minimum of 600,000 silos still in operation, serving 415,000 farm families, on the basis of an average of 1.4 silos per family. Each farm is thus able to safely store about a tonne of maize or beans, Central America’s most important staples.

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In Central America, farmers using metal silos avoided post-harvest losses valued at more than 75 million US dollars from 1984 to 2009, and the impact has continued after cessation of external support.

Such decentralised technology above all improves food security for the farmer and his family. A study conducted in 2011 showed that 70 per cent of the grain stored in a silo was for the family’s own consumption, with just 27 per cent being sold on the market and the remaining 3 per cent carefully set aside to be used as seeds. Surveys have demonstrated that the average annual consumption of a family is 600 to 800 kilograms of maize and 100 to 300 kilos of beans. The available silo storage space is thus enough to meet a farm family’s annual requirement. Farmers who produce only for their own requirements usually have just the necessary storage space, while those who also produce for the market need additional silo capacity.

■ Value added for small farmers ...

The study revealed two most welcome developments for the households of farming families in Central America:

■ Postharvest losses can be extensively avoided. A survey of farmers showed that for 44 per cent of respondents the avoidance of grain losses has been the most positive change brought about by the introduction of silos. The use of silos has helped to increase food security by 30–35 days per year.



Photo: SDC

■ The owner of a silo can save more or earn more. Immediately after the harvest, when supply is greatest in local markets as well as in the cities, the price for maize is at its lowest. However, anyone who can safely store the maize for a few months prior to selling can count on a higher price, or conversely on making a saving by not having to buy when the market price is high. At the time of the harvest, between November and February, about 80 per cent of farmers sell their maize rather than storing it in a silo. In the critical period before the next harvest, between March and July, the situation is almost reversed, with 73 per cent selling only maize stored in the silo.

■ ... and local artisans

Farmers are not alone in being able to add value thanks to a silo. Artisans who fabricate them also increase their earnings. In fact, local fabrica-

tion of the silos from galvanized sheet metal is an important aspect of the Postcosecha strategy. In most cases, the metalworkers who make the silos are themselves farmers who are thus able to acquire a profitable sideline income.

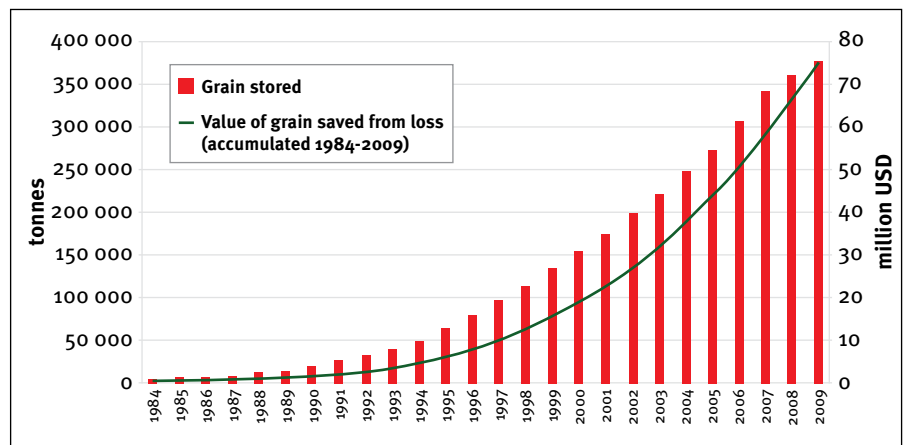
Since the beginning of the programme, 2,000 individuals have been trained in the fabrication of silos. Not all of them have stayed with it, however: some have moved away, others have found new business opportunities, while some have not been able to find anyone to take over the job. It is estimated that 800 to 900 individuals are still making silos. There are considerable differences in the size of their operations. A good third of the metalworkers produced 20 silos of different sizes in 2009. Somewhat less than two thirds sold between 100 to 300 silos, while five per cent were large-scale manufacturers producing an average of 670 silos per workshop. The fabrication of silos is a job for the men, whereas selling the maize is mainly a task for the women.

Many artisans, above all in Guatemala and El Salvador, are on record as saying that their general situation has improved in the past five years thanks to the fabrication of silos. They have more food and more cash income, while the children's education benefits and conditions in the home have improved. Two thirds of the respondents also noted an improvement in their standing in the community since they had begun fabricating silos.

■ Positive cost-benefit ratio

One of the main questions in the ex-post impact study of the programme concerned the macro-economic benefits of the 600,000 silos currently in operation in the four countries of Central America. The storage capacity of the silos has grown steadily each year to reach the present 380,000 tonnes. This corresponds to 13 per cent of the region's annual production of maize, or in the case of Honduras, to 30 per cent. A "critical mass" may have already been reached in the maize

Reduction of post-harvest losses with metal silos in Central America



market of Central America. The study revealed that post-harvest storage in grain silos on a massive scale has had a stabilising effect on the market price of maize, particularly at the local level.

In 2009 alone, metal silos prevented the loss of 38,000 tonnes of maize and beans, equal to the consumption of 50,000 families, for a savings of some 12 million US dollars (USD). If one takes into account the extra earnings farmers make from selling premium maize stored in their silos at a later date the result is even more encouraging. Extrapolating to cover the entire region, it amounts to an additional USD 21 million. According to the authors' estimate, the result for the entire Postcosecha programme between 1984 and 2009 amounts to USD 75 million worth of crop saved from spoiling, with additional revenue for farmers of USD 90–100 million, plus USD 12 million for metalworkers. In comparison, the USD 20 million invested by the SDC and the additional contribution of USD 13 million by non-governmental organisations and the governments of Central America have been an excellent investment, especially when considered as a start-up investment.

Today metal grain silos virtually sell themselves in the region. Even years after the end of Swiss support in 2009 and the departure of foreign advisers the number of silos in use continues to grow. Already, 20 per cent of all beans and maize produced in Central America is now stored in hermeti-

cally sealed metal silos of a type previously unknown here. This is above all due to the fact that in the first five years following termination of the programme, measures taken by the various governments, in particular at national level, ensured the continuing dissemination of the grain silos. Moreover, Postcosecha has become a model for farmers and development organisations in other parts of the world, first of all in other countries in Latin America such as Cuba, the Dominican Republic and Paraguay which followed in the footsteps of their Central American neighbours.

■ South aids South: knowledge transfer to Africa

Given the significant achievements in Central America, SDC decided to make available its accumulated knowledge and experience with regard to implementation of PHM programmes for smallholders experiencing post-harvest losses in other parts of the world, particularly in sub-Saharan Africa. In consequence, more SDC-supported PHM programmes have started recently, in Tanzania and in ten other countries in sub-Saharan Africa. African technicians have initially familiarised themselves with the new method with the help of ex-Postcosecha partners in El Salvador. The first test runs were conducted in Kenya and Malawi between 2008 and 2011, in partnership with the International Maize and Wheat Improvement Centre (CIMMYT). An evaluation has

shown that several new technologies, including metal silos, hermetic bags, metal or plastic drums, improved traditional structures, are appropriate to African conditions and, in certain circumstances, are readily welcomed by farming families. The outlook for the widespread distribution of silo technology is particularly good in Malawi, where the government has recognised the importance to the economy of small farmers and is seriously concerned about food security. However, the price of the metal silos developed in Central America continues to be a significant obstacle for the poorest African farmers. That's why SDC-supported programmes not only make efforts helping smallholders to overcome this initial price barrier (working on policies regarding access to financial services, tariffs, etc.) but also support an array of other storage options (mentioned above). For instance, in a new kind of storage unit that has been successfully tested in Africa, dried produce will be placed in different types of bags which can be sealed hermetically. This approach will be especially useful for female farmers, who make up 45 to 60 per cent of working women in the countries targeted. Hermetic bags are considerably cheaper than a metal silo, but they have a much shorter service life and hardly resist rodents. Silos are a better investment in the long run, but they require a greater initial capital outlay.

The new grain storage methods are due to be introduced in regions where there is traditionally enough maize for self-sufficiency and a surplus that can be sold on the market, but which face difficult problems with pests and disease. Their introduction will be supported by the training of agricultural consultants, and artisans for fabrication of the silos. Staff from government and non-governmental organisations as well as the private sector will be entrusted with the marketing of both the silos and plastic bags. To ensure an environment favourable to this economic policy and farmer-friendly measures, the authorities and entrepreneurs must be convinced of the requirement for them, and a suitable agricultural policy has to be promoted.

■ Need for action

The introduction of new technology in sub-Saharan Africa is all the more pressing in view of the size of post-harvest grain losses, estimated at 10 to 20 per cent (FAO, World Bank: "Missing Food", 2011). The numerical distribution of the losses shows that some farmers lose almost their entire harvest. In African countries where the pest known as the Larger Grain Borer is prevalent, post-harvest losses are substantially higher than elsewhere. In the maize producing countries of the southern and eastern regions, damage amounts to USD 100 million each year. Farmers of both sexes are so afraid of the expected storage losses that they often try to sell their produce immediately after it has been harvested. In order to ensure their own sustenance they frequently have to buy the maize back at much higher prices just months later. The availability of this food a few months after the harvest would help to combat hunger and poverty. And farmers' incomes would increase as well, stimulating economic growth in rural areas. Furthermore, it is not merely a question of reducing quantitative losses, for poor storage also results in the loss of essential nutritional

elements, which in turn impacts the health of population groups affected by HIV/AIDS.



Traditional grain storage structure in Benin.

Photo: M. Streit/SDC



In the short term, hermetic bags are cheaper than a metal silo – an important advantage, especially for female farmers.

Photo: SDC

SDC's work on food security

The "SDC Global Programme Food Security" builds on the lessons learned in Central America as well as in Eastern and Southern Africa. The programme involves the cooperation of the United Nations Food and Agriculture Organization (FAO)/ International Fund for Agricultural Development (IFAD), World Food Programme (WFP), the non-governmental organisation Helvetas Swiss Intercooperation and various African centres of expertise. The focus is on the processing and storage of cereals and pulses by individual farmers, groups of farmers and co-operatives. The experiences to date and the results of related tests are to be exchanged and made available throughout Africa.

SDC's "Agriculture and Food Security Network", and in particular its subgroup on post-harvest losses, will liaise and encourage world-wide knowledge-sharing for all the different post-harvest relevant projects supported by SDC.

For more information on SDC's programme on food security and project descriptions, see: > www.postharvest.ch

Reducing child labour in agriculture through agricultural projects

According to the International Labour Organisation (ILO), a large share of child labour takes place in family-based agriculture. However, most agricultural projects do not address child labour, even though they have the potential to contribute to its prevention and reduction. Raising awareness about project impacts on child labour and the inclusion of child labour issues in the planning, monitoring and evaluation process of agricultural projects is one promising way to tackle child labour in agriculture, as demonstrated by a study in Cambodia.

Sixty per cent of the 168 million child labourers in the world are working in agriculture, one of the most dangerous sectors for children to work. In total, 50 million children are performing hazardous work or are working under hazardous conditions in agriculture (ILO/IPEC, 2013). Children in rural areas are often very young (5–7 years) when they start to work as their families depend on the support of every family member (FAO, 2010:1). This also applies to Cambodia, the case study of this article. Cambodia is still one of the world's poorest countries and has a predominantly rural population, with half of its workforce employed in agriculture. In Cambodia, 51.1 per cent of the child labourers are working in agriculture, taking the various sub-sectors crop production, livestock, fisheries, aquaculture and forestry (ILO, 2013:76) into account.

Children's work in agriculture is ambiguous. While it can help the children to learn skills and can contribute to generating their families' income with positive impacts on their livelihoods, rural work is physically demanding and implies serious hazards and risks for children's health and development. Hazards include e.g. the



A fisheries community in the Tonle Sap region in Cambodia. Children often have to stay in the fisheries overnight.

Photo: L. Bullerdieck

use of sharp tools or dangerous machinery, exposure to UV radiation and extreme weather conditions, carrying heavy loads, repetitive movements or the use of agrochemicals. Furthermore, much of the agricultural work is seasonal and often incompatible with school calendars, so that children miss school regularly or their working activities force them to drop out.

Distinguishing between child work, which may have positive impacts on the child's future, and child labour, which is harmful to a child's development, is not always as easy and straightforward as it may seem. The definition of child labour encompasses

the complex concepts of childhood, work and labour and, referring to the international conventions on child labour, comprises different criteria like the age of the child or the working environment (see Box on page 38).

■ Challenges in addressing child labour in family-based agriculture

In recent years, the issue of child labour linked to commodities with an international value chain like cotton or cocoa has received some attention by politicians, retailers and consumers. As a result, international and national

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legislations and policies have been implemented, trying to address especially the worst forms of child labour in plantations or cocoa farms. But child labour taking place in family-based subsistence agriculture has been largely neglected. However, tackling this issue is an urgent, yet complicated challenge for three reasons:

- Firstly, family-based agriculture is mainly informal and rarely covered by national labour legislation (FAO, 2013:12).
- Secondly, child labour in family-based agriculture is mostly invisible because of frequently remote workplaces and blurred boundaries between workplace and household (FAO, 2013:12).
- Thirdly, parents are often little aware of the negative effects of child labour and lack alternatives.

This became evident in Cambodia. Although a national legislation on child labour exists, it does not sufficiently cover child labour in a family-based working environment. Child labour in this context is mostly invisible in contrast to work on bigger plantations or in factories, as experts in Cambodia indicated. In addition, discussions with farmers proved that many parents rely on the work of their children due to their economic situation but are not always aware of the negative effects specific agricultural tasks have for their children.

■ Agricultural projects should share responsibility

The main cause of child labour in family-based agriculture is persistent poverty in rural areas. In Cambodia, poor smallholder farmers often rely on the work performed by children in order to meet immediate needs for survival. Therefore, reducing rural poverty is closely related to and a precondition for reducing child labour in agriculture. As agricultural projects aim to improve the livelihoods of smallholder farmers and to reduce rural poverty, they play a crucial role in reducing child labour in family-based agriculture. Furthermore, agricultural projects may contribute to

Child labour in Cambodia

- 19 % of the four million children between 5 and 17 years are working (ILO, 2013:26)
- 10.9 % of all working children are child labourers, 6 % of them are engaged in hazardous work (ILO, 2013:26)
- 48.6 % of the child labourers are unpaid family workers (ILO, 2013:72)

International legal framework on child labour

The **ILO Minimum Age Convention No. 138 (1973)** marks out the minimum age for different types of employment: age 13 for light work, age 15 for ordinary work, and age 18 for hazardous work.

The **ILO Convention No. 182 (1999)** defines the worst forms of child labour.

The **UN Convention on the Rights of the Child (1989)** introduces the child's right to education and, when talking about child labour, refers to work that interferes with children's schooling.

How is child labour defined?

Child work turns into child labour when children:

- are too young for the work they are doing,
- work too many hours (for their age),
- undertake work of hazardous nature or under hazardous conditions, and/or
- work under slave-like conditions.

Child labour is defined as work that impairs children's well-being or hinders their education, development and future livelihoods. It is work that is damaging to a child's physical, social, mental, psychological or spiritual development (FAO/ILO, 2013:7).

keeping children out of child labour and to reducing the hazards child labourers in agriculture are exposed to by awareness raising and training.

Although the majority of agricultural projects do not explicitly address child labour, most of them will have intended or unintended, direct or indirect impacts on child labour. While agricultural projects can have an influence on reducing the hazards that working children are exposed to in agriculture, activities of agricultural projects can also lead to more labour demand in the project area, which might be compensated with child labour.

■ The Cambodian case

The research looked at six projects implemented by the Ministry of Agriculture, Forestry and Fisheries, the United Nations Food and Agriculture Organization (FAO) and different bilateral donors. The projects ranged from supporting fisheries in the Tonle Sap

region to improving food security, livelihood and market linkages. In all projects visited during the research in Cambodia, children worked in family-based agriculture. Their tasks ranged from preparing the land and transplanting seedlings through weeding, herding and taking care of chicken to feeding animals and fishing. Hazardous work was mainly associated with spraying agrochemicals or staying in fisheries overnight. But the main problems are that children start working below the legal minimum age and that they work too long. Cambodian legislation does not address child work in family-based agriculture but limits the permitted working hours by children aged over twelve years according to the international conventions. Nevertheless, the research showed that children below twelve often work two to five hours a day in family-based agriculture, which is significantly more than permitted under Cambodian law.

Agricultural projects in Cambodia focus mainly on improving the income

situation of smallholder farmers by introducing new agricultural varieties or production systems (e.g. chicken raising). Some of these new agricultural technologies are labour-intensive. However, a number of regions have a shortage of labour, especially those bordering on Thailand and Vietnam that are suffering from workforce migration. This is partly compensated by the work of children. In consequence, the new technologies resulted in an increased labour demand for children.

Apart from that, children generally benefit from the improved income situation of smallholder farmers thanks to activities of agricultural projects in Cambodia. More income enables smallholder farmers to spend more on the nutrition of their children and invest more in their children's education. Therefore, the picture that emerged concerning the impacts of agricultural projects on children in Cambodia was ambiguous: positive and negative impacts often go hand in hand. However, most of the project staff visited during the research were not aware of the impacts of their activities on children and did not integrate them into the planning and monitoring of the project.

■ Recommendations for agricultural projects

Against this background, it is important for agricultural projects to realise that their activities influence the working situation of children and to assess to what extent and how they influence the working situation of children. Even if the reduction of child labour in family-based agriculture poses a severe challenge and is not the central thematic scope of agricultural projects, there are some entry points for promoting the reduction of child labour that do not require specific knowledge or greater expenditures:

- Awareness raising: Awareness raising amongst project staff and smallholder farmers concerning the harmful effects of child labour on children's development can e.g. be integrated into trainings.
- Integrating child labour considera-



Photo: L. Bullerdeck

A focus group discussion in the project region. The six projects investigated ranged from supporting fisheries to improving food security, livelihood and market linkages.

tions into planning, monitoring and evaluation (P, M&E): The integration of child labour considerations into P, M&E enables agricultural projects to determine at an early stage the extent of their impacts on child labour and whether preventive and corrective actions are required. Furthermore, considering child labour concerns in M&E systems allows the identification and dissemination of good practices in order to respond to child labour in agriculture.

- Reducing hazards: Agricultural projects should at least ensure that their activities do not lead to children undertaking hazardous work. This is of high relevance when supporting smallholder farmers with agricultural inputs such as fertilisers or pesticides, or agricultural tools and machinery.
- Promoting positive impacts: Activities that contribute to the reduction of child labour in agriculture should be disseminated and up-scaled.
- Considering children when designing trainings: Training modules directly addressing children (e.g. Junior Farmer Field Schools) might be a useful approach to provide children and youths with skills for their future employment. However, it must be ensured that these trainings do not interfere with the children's well-being and their right to

education, which would open the door to child labour.

■ What should be kept in mind?

Children contribute to their family's income with their agricultural work, and an increased family income often means better education and nutrition for the children. When thinking about improving the situation of children by implementing certain activities, agricultural projects should bear the complex interplays of their potential impacts in mind.

For instance, just because labour saving technologies might reduce the demand for child labour in one particular area of activity, a child will not necessarily attend school instead of working. The child's labour force might be used in other areas of agricultural activities, unless parents are aware of the benefits of education and unless quality education is easily accessible and affordable. And above all, merely reducing the working hours of children without offering economic alternatives for smallholder farmers to compensate income losses will probably negatively influence their livelihoods and consequently their children's situation.

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Climate change, environment and migration in the Sahel

In the debate on climate change, it is frequently argued that the number of “climate refugees” is going to grow world-wide. So far, however, only little evidence has been provided of links between climate change, environmental changes and migration. The transdisciplinary research project “micle” – migration, climate & environment – has examined this link in selected areas of the Sahel zone.



The transdisciplinary research project micle – migration, climate & environment – was funded by the German Federal Ministry of Education and Research (BMBF), and conducted by the Institute for Social-Ecological Research (Frankfurt, Germany) in cooperation with the Institute for Geography at Bayreuth University. It investigated the relationship between climate, environmental degradation, and migration in selected areas of the Sahel region.

The West African Sahel is one of the regions most vulnerable to climate change and climate variability. The study “micle” – migration, climate & environment – focused on land degradation as an example of gradual, slow-onset environmental changes and its impacts on population mobility. It pursued an inter- and transdisciplinary approach which combined natural science and social science methods and also included input e.g. from farmers, migrants, and development organisations.

Case studies were conducted in two regions: Linguère in Senegal and Bandiagara in Mali (see Map). Both study areas are located in the semi-arid Sahel zone and have always suffered from periods of drought and, in

part, from land degradation. Climatic changes and human activities have contributed to massive changes of the flora, fauna and soils in the rural study areas. After an extremely dry period with severe droughts from the 1970s to the 1990s, rainfall has been increasing in both regions, but its variability is growing, too. These changes are causing an increase in vegetation in many areas – the so-called ‘greening phenomenon’. This trend is supported by farmer-managed agro-forestry, reforestation programmes and nature conservation measures.

In spite of this positive trend, effects of climate change such as higher temperature and less precipitation have contributed to a decreasing diversity of woody species and favoured the

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increase of robust and more drought-resistant species. In some places, overgrazing, deforestation and the expansion of agricultural areas have contributed significantly to spreading land degradation. Thus, the causes of the environmental changes are both climatic and anthropogenic.

■ Livelihoods in Bandiagara and Linguère – and the impact of climate change

The two study regions in Mali and Senegal were also selected for the reason that they are subject to an increasing out-migration. The micle project investigated in detail how the local population perceive environmental changes, as well as their motives for migration. Among other methods such as in-depth interviews and participant observation, a standardised survey was conducted with more than 900 persons: villagers living in the rural areas of Bandiagara and Linguère as the home places and migrants in the capitals Bamako and Dakar, two important destinations.

The results show that agriculture is the paramount economic activity and source of income in both rural study areas. The majority of interviewees and their families are engaged in arable farming, and, particularly in Sen-

egal, in livestock breeding. In many cases, agriculture is combined with other activities such as gardening or small-scale business.

The level of education is considerably low – almost 80 per cent of the survey participants have no formal schooling at all, and at 70 per cent, the illiteracy rate is high. The lower the education level, the more likely for agriculture to be the main source of income in the rural areas.

Households which are highly dependent on rain-fed agriculture are particularly vulnerable to rainfall variability and ecosystem degradation because these environmental factors have negative effects on crop yields and harvests. A villager in Linguère reported: “Rainfall is becoming more and more erratic, and the rainy season has got more unreliable during the last few years.” Similarly, an elder farmer in Bandiagara noted: “Since the drought in the 1970s, there have been increasing anomalies in grain yields, and also insufficient rainfall.” Inadequate rainfall can directly compromise the income basis of rural households, because it affects the agricultural production and returns.

Against this background, migration can be one strategy for reducing the risks and compensate bad harvests by

means of income diversification. However, it is not the only risk-minimising strategy referred to by the interviewees. In Bandiagara and Linguère, people adopt different strategies to cope with negative effects of environmental changes such as crop failures. In Mali, for example, important compensation strategies include asking for more financial support from family members who have already migrated, and to increase the number of migrants within the family. In Senegal, there are other important strategies such as the sale of cattle. In both regions, mutual aid among the villagers is mentioned as an important response to crop failures and income losses.

■ Population mobility and motives for migration

Migration plays an important role in the Sahelian culture. This fact was verified in the social-empirical analysis: 87 per cent of the survey participants have personally experienced migration. The great majority regard migration as something positive: 86 per cent would recommend migration to other family members. Temporary movements (10 months to less than five years) and seasonal migration (3 to 9 months) are the most dominant temporal migration patterns (each around 40 %). People

Shifting rainfall patterns and insufficient yields are an important reason to migrate during the dry season for people in the West African Sahel.



Photo: D. Hummel

practising seasonal migration leave the villages during the dry season and return back home for the harvest time. At around 24 per cent, permanent migration (more than five years absence from place of origin) is relatively low.

Similar to other West African countries, migration in Mali and Senegal is predominantly internal and regional. Eightysix per cent of the respondents had moved within the countries, particularly to larger urban areas; the capitals Bamako and Dakar are the most important destinations. In Senegal, only four per cent of the respondents crossed international borders, the majority of whom moved to European destinations (France, Spain, Italy). In Mali, the percentage of international migration is significantly higher (25 %), with Ivory Coast as the main destination. Usually, migrants maintain close relationships with their families and home villages.

Asked why they migrate, people's answers show that economic motivations – seeking money and jobs – are the most important reasons to leave home, although they usually overlap with other motivations. Family reasons, visits and education, are other important causes to migrate. Food security is mentioned by 29 per cent of respondents in Senegal and six per cent in Mali. This motive is in close relation to environmental, but also economic factors.



Photo: D. Hummel

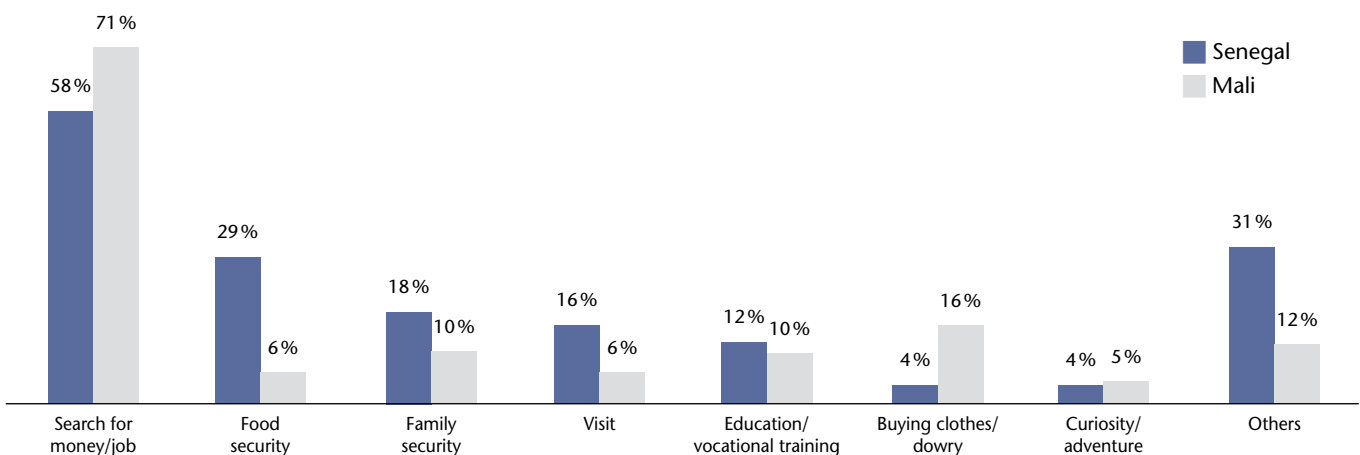
The majority of the people interviewed in the scope of the project have moved within the countries, particularly to larger urban areas.

For many interview partners, shifting rainfall patterns and insufficient yields are an important reason to migrate during the dry season. However, seasonal migration is a long-established strategy to cope with the harsh environmental conditions in the semi-arid rural regions. Seasonal migration is still being practised today, but also in times of favourable rainfall patterns and successful harvests. This indicates that motives for migration are manifold and change over time, and that there is usually not only one single reason behind the decision to migrate. Social relations and migrant

networks are important factors for the migration decisions and for the choice of destination.

Moreover, motives for migration differ widely with regard to gender, age and education level. While seeking money and employment is the most important motive for both men and women, this motive is more often mentioned by male respondents. However, family reasons and visits are particularly important for women in general, while economic reasons become more important for younger women.

Motives for migration (multiple answers possible)



Source: micle survey 2012 (Senegal n=388; Mali n=398)

Migration is closely interrelated to the education level. People with higher formal education are less vulnerable to environmental hazards because they are less dependent on environment-sensitive economic activities. These findings illustrate that individual characteristics such as gender, age and education level are of crucial importance in determining who migrates and who does not migrate, and for which reasons.

■ Migration as a livelihood strategy

Most people in the study areas in Mali and Senegal rely on small-scale farming and subsistence. But for most households in the rural areas, food security cannot be guaranteed only on the basis of local agricultural production. Although it is impossible to determine the exact role environmental factors play in migration decisions, the micle study revealed how climate change and land degradation affect migration decisions through the following factors:

- When people are highly dependent on agriculture and thus on local agro-ecological conditions and rainfall patterns,
- when opportunities for income diversification and non-farm activities are rare, and
- if access to social capital and financial capital (e.g., for fertiliser, agricultural technology) is low.

Individuals, households and communities are not equally affected by climate change and environmental degradation. The most vulnerable are those households that have only a low level of education and who depend strongly on small-scale agriculture. A great number of people affected by poverty have only limited options to master crises and environmental stressors. For them, migration can indeed be the only possibility to improve their food security. For others, migration can be a strategy to minimise risks of environmental stressors. Yet, migration is more than adaptation and not automatically the only

last resort. Overall, it indicates the desire for a better life.

■ Policy options

The findings of the micle project confirm that climate changes and ecosystem degradation can indeed have effects on the mobility of the people. However, results also show that the relationship between climate, environment and migration is complex, and that environmental stress is usually not the most important factor causing people to migrate.

The prevention of migration cannot be regarded as an adequate political option, since mobility is deeply rooted in the history and culture of West Africa. Instead, policies should make use of the positive potential of migration for sustainable development. For example, already existing “co-development” approaches favour the transfer of remittances, knowledge and skills, as well as investments of migrants at home.

Investments into sustainable agriculture should be combined with impulses for employment and income opportunities in other economic sectors. Therefore, integrated regional development strategies are required which focus on linkages between urban and rural areas. For example, they should consider infrastructure development and the promotion of integrated land and water resources management for the prevention of land degradation.

Above all, the young generation need much better education opportunities in the region. Education is of paramount importance with regard to reducing vulnerability, alongside the improvement of gender equality and empowerment. Cross-sectoral political strategies are thus required which integrate issues of migration, socio-economic development and environment, and which consider the participation of relevant societal actors and stakeholders.

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