Chapter 5
Bold action for secure livelihoods

This final chapter outlines how many economic, social, environmental or technology-driven crises can be avoided – or their effects on livelihoods mitigated – through innovative actions which build more secure livelihoods. Building resilience and inclusion involves two main strands: prevention and adaptation. Global or multinational action will be needed for many of the preventive policies required to avert crises linked to the financial system, to climate change, to pandemics and many other challenges. On the other hand, policies at the national or local level are more appropriate for enhancing individuals' adaptation capabilities. The chapter outlines a range of possible initiatives, and ends with a call for action for all relevant players – international, national, local – to move forward and prepare to ensure a better future for livelihoods.

Key messages

- Building secure livelihoods involves two main strands: prevention and adaptation.
- **Global** or multinational preventive action will be needed to avert crises linked to the financial system, to climate change, to pandemics and many other challenges. This includes:
  - reaching an urgent global agreement on climate change
  - stabilising the global financial system
  - entering into appropriate multilateral agreements to prevent tax evasion by multinational enterprises and improving progressiveness of tax system
  - managing international migration as an opportunity for global well-being
  - strengthening disaster and disease response capacity
  - creating the conditions for a livelihood-focused technology revolution.
- **National** policies can promote inclusiveness and enhance individuals' capacity to adapt, by:
  - making education accessible for all, with a myriad of pathways for skill acquisition (including basic livelihood skills) and the opportunity for lifelong learning in open-access virtual classrooms. Access to information technologies is of the utmost importance
  - supporting livelihood portfolios made up of part-time work, paid training, and catch-all social support systems
  - investing in children and young people as an opportunity to enhance human capital
  - using green growth to underpin resilient livelihoods
- While support at the national level is needed, it is increasingly up to **individuals and communities** to take action and experiment with options for making their livelihoods more resilient, such as:
  - organising new local economies – such as bartering, skills and services exchanges and sharing – based on social and solidarity principles rather than capitalism.
  - developing new ways of accessing micro-finance, from the use of ICT platforms (such as M-Pesa), to group lending, micro savings, micro finance, crowdfunding and local currencies.
  - building green and resilient cities to reduce emissions, and boost jobs and growth at the same time.
  - solving local problems through citizen action, in close partnership with government.

The scenario exercise in Chapter 4 alerts us to the urgent need for policy options that promote more inclusive and resilient livelihoods across the world. All three of the crisis scenarios raise the spectre of greater inequalities – in income, education and other public services – and social disruption in both developed and developing countries. Innovative actions may avoid or mitigate the negative effects of economic, social, environmental or technology-driven crises, and build more secure livelihoods. Moreover, the two opportunity-based scenarios give hope for improved livelihoods through actions involving new forms of living and working. Although these partial scenarios are simply illustrative of a range of possibilities, they serve to identify policy options that appear to be relevant for the future of livelihoods under many circumstances.

This final chapter gives a taste of what some of these innovative actions might look like, drawing on insights from the scenario exercise and from ideas that emerged during the meeting in Bellagio (see Chapter 1). The ideas suggested here would need to be fleshed out in more detail, and additional policies would need to be considered for other scenarios.

Building resilience and inclusion involves two main strands: prevention and adaptation. Resilience can be enhanced if crises are prevented in the first place. And by detecting negative trends and taking appropriate adaptation measures before crisis point is reached, the effects can be much less serious. Global or multinational action will be needed for many of the preventive policies required to avert crises linked to the financial system, to climate change, to pandemics and many other challenges. On the other hand, policies at the national or local level are more appropriate for promoting inclusiveness and enhancing individuals' adaptation capabilities.

The following three sections discuss examples of possible actions at the global, national and local level respectively. Independent of the targeted level, policies or programmes may be introduced by public authorities, private entities and non-government organisations such as foundations, and individuals or community groups. The sections also contain some "visionary ideas" in boxes. These ideas emerged during the Bellagio workshop on securing future livelihoods (see Box 5.1); they are deliberately provocative, but illustrate the type of bold thinking needed to generate fresh perspectives.

Box 5.1. Secure Livelihoods: Visions of a better future

As indicated in Chapter 1, Box 1.1, this work results from a joint initiative of The Rockefeller Foundation, the Economist Intelligence Unit (EIU) and the OECD Development Centre. A key step was a meeting organised in Bellagio in August 2015, hosted by The Rockefeller Foundation and moderated by the EIU. The meeting gathered 27 high level experts from government, academic and business sectors. In particular, brainstorming sessions were organised to propose bold and concrete initiatives that could help to secure livelihoods in the long term. Some of those ideas are reported in the boxes below, signalled by the label "Visionaries at work". For more information, see the summary of the discussions: *Secure Livelihoods, Visions of a Better Future* (The Rockefeller Foundation, 2014).

Global problems require global solutions

Sustained global efforts are needed to mitigate negative trends or to reduce the risks of emerging crises which threaten to undermine livelihoods. Although a detailed discussion of the global agreements needed on issues related to finance, the climate and

so on is beyond the scope of this book, it is worth pointing to some entry points in which the global community, and notably some of its pivotal actors, can have a significant impact.

Climate change requires urgent global agreement

Chapter 3 has outlined the far-reaching impacts of climate change, while Scenario 2 in Chapter 4 tells how livelihoods could be seriously affected by climate change-induced drought.

Urgent global agreement is the main way forward for limiting the human actions that are contributing to global warming. The Conference of the Parties (COP 21) to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) to be held in Paris in November 2015 will be a key opportunity for bold global action. Recent signs are encouraging, in the form of the US-China deal to reduce $C0_2$ emissions. This agreement aims to see China's emissions peak around 2030, and the US to reduce emissions to between 26 and 28% by 2025 compared to 2005 levels.

Greater progress is also needed to establish a fund for helping developing countries in their efforts towards climate mitigation and adaptation. While it is planned to amount to USD 100 billion per year, to date pledges only total USD 10 billion.

The global financial system needs to be stabilised

The "global financial crash" scenario in Chapter 4 paints a dire picture of the impact of another financial crisis. Often such crises affect poor people more than richer people. Further progress is needed to prevent financial speculation with uneven potential gains and losses on an investment (Wolf, 2014). The OECD has recently proposed new measures to be agreed at the international level to prevent the formation and propagation of financial risks of mismanaged national systems (Box 5.2; and see OECD, 2012a).

Box 5.2. How has the OECD responded to the 2008 financial crisis?

In response to the unforeseen character and long-term consequences of the 2008 financial crisis, the OECD has undertaken an organisation-wide reflection on the roots of and lessons from the global crisis, and an exercise to review and update the OECD's analytical framework. Of particular note was the launch of its initiative "New Approaches to Economic Challenges" in 2012.

This analytical effort has led to a number of measures for managing systemic financial risks being proposed for discussion, including: (1) to adopt agent-based models that could make comprehensible the complex behavioural dynamics, information asymmetry and externalities affecting the financial system (OECD, 2012a);[1] (2) to strengthen the capital base of banks and make their business models safer by reducing leverage and making risk-weighting of assets less complex and less open to regulatory arbitrage; (3) to broaden the range of non-bank financing instruments available to small and medium enterprises and entrepreneurs; (4) to allocate long-term funds from institutional investors to illiquid assets such as infrastructure; and (5) to reform the managers' remuneration structure as to foster ethical and socially optimal risk strategies (OECD, 2015).

Other policies proposed include some of the concrete ideas mentioned in Chapter 4 (Scenario 3), in particular the need to separate high-risk activities from conventional banking, to give local communities resilient financing solutions and to improve financial literary and inclusion.

1. An agent-based model (ABM) is one of a class of computational models for simulating the actions and interactions of autonomous agents (both individual or collective entities such as organisations or groups) with a view to assessing their effects on the system as a whole.

Shared prosperity can be achieved through tax reforms

Growing inequality is a worrying emerging trend (Chapter 3). Several of the scenarios in Chapter 4 highlight how inequality may drive social unrest and large economic migrations. How can bold rethinking about the way our global economy functions avoid such risks for livelihoods and increase equality? Three possible actions in the area of taxes include:

1. Actively participate in international negotiations on co-ordinated action to combat tax base erosion and profit shifting by multinational enterprises, including by taking action to prevent double non-taxation, and change domestic laws as necessary (Box 5.3).
2. Enter into appropriate multilateral agreements to prevent tax evasion by multinational enterprises, including by providing more transparency of financial account information through the implementation of Automatic Exchange of Information (Box 5.3).
3. Reform the tax system to make it more progressive and equitable.

Box 5.3. Coordinated international efforts on tax matters

Multinational enterprises may avoid taxation by artificially shifting profits to low or no-tax locations where there is little or no economic activity, resulting in little or no overall corporate tax being paid (OECD, 2013a). Known as base erosion and profit shifting (BEPS), this practice is of major significance for the developing countries involved, due to their heavy reliance on corporate income tax – largely from multinational enterprises. The OECD/G20 BEPS Project is developing recommendations on 15 specific action items to ensure that this challenge can be addressed in a coordinated way.

In response to a request by the G20, the OECD developed a Standard for the Automatic Exchange of Financial Information for Tax Matters in 2014 for the different types of accounts and taxpayers covered as well as common due diligence procedures to be followed by financial institutions.

For more details see: www.oecd.org/ctp/beps.htm and http://www.oecd.org/ctp/exchange-of-tax-information/automatic-exchange-of-financial-account-information.htm

An inclusive approach to international trade is needed

Under the right conditions, an open trading system can be fundamental for sustained economic growth and the future of livelihoods (Feenstra, 2003). The global trading system would be particularly challenged by a new global financial crisis (see Scenario 3 in Chapter 4). A slowdown in world trade is already noticeable, with increasing signs of protectionist measures (Evenett, 2014). On the other hand, the good news is that after problems in concluding the Doha negotiations, the World Trade Organisation (WTO) has made progress towards an agreement on trade facilitation, which could reduce trading costs by 14% for developing countries and 10% for developed countries (OECD, 2014). Going forward, the liberalisation of services trade – which represents up to 50% of global trade – should receive more attention in the WTO negotiations.

However, an inclusive approach to trade is necessary. Free global trade could have negative consequences for a number of industries and for the livelihoods of people working in these industries – in both developed and developing economies. This may

create pockets of poverty, leading to social resentment and unrest. Possible solutions could include implementing new trade regimes and agreements in developing countries gradually, so as to allow time for new industries and services to develop.

Better global and regional co-ordination of policies on international migration is needed

International migration is increasingly recognised as a central pillar of economic and social development. While it can benefit migrants' livelihoods, it also raises both opportunities and challenges for their countries of origin and destination. Looking ahead, major global trends are likely to shift global migration patterns (see Chapters 3 and Chapter 4). Some of these changing trends may occur rapidly and will force public authorities to adjust policies and governance structures rapidly. In the absence of adequate, globally- or regionally -co-ordinated policies, migration can pose challenges to livelihoods in both sending and receiving countries.

To prepare policies which respond to international migration, an informed discussion of possible trends and their impacts in the future is essential. The importance of migration for livelihoods is recognised internationally, particularly through the Global Forum on Migration and Development (GFMD), the Global Knowledge Partnership on Migration and Development (KNOMAD) as well as the Global Migration Group (GMG). These fora engage with governments, organisations and experts around the globe to address the migration and development interconnections in practical and action-oriented ways and to enhance dialogue towards the inclusion of migration-related issues on the post-2015 development agenda. The 2016 edition of the OECD Development Centre's *Perspectives on Global Development* report will explore what the future of international migration could look like, how it affects livelihoods and what policies are needed to secure them.

Disaster response capacity needs to be strengthened

The impacts of natural disasters on livelihoods can be considerable. Recent dramatic events – the 2004 earthquake in the Indian Ocean, Hurricane Katrina, the earthquake in Haiti in 2010, and the earthquake and tsunami in Japan – all caused appalling losses to life, livelihoods and infrastructure. While the UN and some national governments have stepped up their early warning systems and rapid deployment and intervention systems, these need to be scaled up. As populations increase there are likely to be more people affected by natural disasters, and climate change is likely to increase the frequency and severity of many events. More needs to be done to strengthen disaster response capacity through more funding and capacity building at both international and local levels. The world should also be better prepared for unexpected major disasters, such as sudden, large-scale solar radiation or a complete breakdown in electricity and Internet networks. The global or regional impacts should not be underestimated (OECD, 2011a). A global information campaign is urgently needed to inform people of such risks and measures must be taken to organise back-up energy and communication facilities.

Response to global pandemics could be improved

Disease has fundamental implications for livelihoods. As revealed by the Ebola crisis, there is a need to strengthen international institutions to deal with pandemics. There is also a need for better detection and for quicker vaccine development, production and deployment. The response to Ebola has been very slow – we still lack a tested vaccine and the production and systems for inoculating the millions of people at risk. There are also

endemic illnesses, such as malaria and dengue fever, for which we have not yet found a satisfactory response and which continue to kill millions of people every year. However, promising initiatives such as GAVI, the global vaccine alliance, attest to the possibility of engaging in global public partnerships to tackle issues like immunisation. GAVI brings together public and private sectors with the shared goal of creating equal access to new and underused vaccines for children living in the world's poorest countries.[1]

Stronger water sharing agreements could avert conflict

In a future involving more frequent and severe droughts in the developing world, stronger agreements on water sharing (e.g. of river water) will be necessary to avert conflicts over water. For example, the Middle East is already arid, and its river basins are shared by many countries that are already in conflict. In the absence of sturdy mechanisms for sharing water, worsening drought will only exacerbate these conflicts. In Asia, where China alone shares more than 40 watercourses with 16 countries, the water treaty regime in place is rather limited (Chen et al., 2013; Wouters, 2014). Two global instruments – the 1997 UN Watercourses Convention 1 (UNWC) and the 1992 UNECE Transboundary Waters Convention (UNECE TWC) – could be borrowed to improve the international water management regimes in Asia and in the Middle East.

Global action is needed on cyber security

Cyber-attacks on individuals, enterprises, banks, infrastructure and governments increase daily (see Chapter 3; and Norton, 2011). Attacks are often followed by retaliation, drawing the world into a dangerous vicious circle. As Internet networks are increasingly globalised, appropriate solutions are needed at the global level. These might include an international cyber police force, established under international bodies and mandated by governments, but operating independently and within commonly agreed ethical rules on privacy of data, conditions of investigations, among other things.

Technology development could focus on livelihoods

As we have seen from earlier chapters, technology could be a potential game changer for global livelihoods, especially if focused on global "public goods" such as climate, clean energy, environment, health and the needs of people at the margin of subsistence. Yet the global research and development (R&D) system lacks institutions and mechanisms to fund such socially oriented R&D. While global R&D spending was expected to be USD 1.6 trillion in 2014 (Grueber et al., 2014) or roughly 2.1% of global GDP, more than 70% was carried out by the private sector and mostly focused on market opportunities.

There are some government initiatives for research to tackle global public goods such as clean energy and global health. Many governments, particularly in developing countries, have set up special initiatives to encourage inclusive innovation aimed at vulnerable populations. Some private companies, particularly multinationals, are also discovering that there is money to be made by developing goods and services aimed at low-income populations because of the large numbers of potential consumers involved (Prahalad, 2006). In addition, some large foundations are filling the funding gap to encourage private companies to invest in technologies for the poor. A good example is the Gates Foundation's Global Health Initiative (OECD and World Bank, 2014). However, there is no large-scale programme that focuses on correcting the market failures which discourage research to support global public goods. Brainstorming sessions at Bellagio came up with an interesting proposal, outlined in Box 5.4.

Box 5.4. Visionaries at work: A "white" DARPA? An international innovation agency for global public goods and livelihood improvements

The Defense Advanced Research Project Agency (DARPA) was created within the US Department of Defense in 1959 "for high-risk, high-payoff research, development and demonstration of new technologies and systems that serve the warfighter and the Nation's defense" (DARPA, n.d.). By co-ordinating specialists in different disciplines, it acts as an intermediary between researchers who create ideas and potential applications, which DARPA then hands over to specialised actors to implement. Some of DARPA's key achievements include what eventually became the Internet, the stealth bomber, the global positioning system (GPS), unmanned air vehicles, precision bombs, and many other technologies which have led to what some call a revolution in military affairs (Van Atta, 2008).

It should be possible to set up an international DARPA-type organisation to create a scientific basis for producing radical game-changing technologies for global social welfare rather than for military applications. International development institutions, foundations, and interested governments could help orchestrate the global funding for such an effort. The main problem would be setting up the appropriate governance and management structure for such an organisation. One of the reasons why DARPA has been successful is that it is very agile organisation that plays a co-ordinating and facilitating role. This requires extremely able managers, strong discipline and the willingness to take risks, all of which are hard to come by in governments or in internationally funded efforts that require a high level of transparency and clear accountability.

However, if appropriate governance arrangements can be developed, a "white DARPA" focusing on global public goods and the livelihoods of at-risk populations could have a very positive impact on the future of livelihoods. It could prioritise those technologies identified in this report as particularly important for livelihoods in some regions, such as desalination and water technologies, farming technology, and renewable energy in the context of a new "green revolution" (see Box 5.8). In this spirit, the so-called ARPA-Energy in the United States, modelled on DARPA, advances high-potential, high-impact energy technologies that are too early for private-sector investment (see www.arpa-e.energy.gov).

Sustaining livelihoods calls for innovative national policy approaches

Discussions in Bellagio revealed that the control and responsibility for livelihoods is increasingly shifting from governments to communities and individuals themselves (The Rockefeller Foundation, 2014), suggesting a new role for government as backstop and enabler in forming creative and regenerative societies. The scenarios in Chapter 4 also suggest the need to re-think and re-tool the way in which governments and national actors work. Their role should be to fund and create jobs and build social protection programmes that meet livelihood needs, in a socially inclusive way. The potentially devastating impact of uncertain global forces and the shift to a knowledge-based economy demand that governments do more to meet their populations' basic needs. They can do this through guaranteed minimum incomes; safety nets for healthcare, pensions and unemployment; and by funding local job, training and education incubators.

Education is vital for both inclusiveness and resilience

With the evolution towards knowledge-based economies, high quality and gender-neutral education becomes essential and needs constant improvement. Education helps people to break out of poverty and reduces inequality. It allows people to develop vital life skills and to become aware of and adapt to major social, environmental and other

challenges. Therefore action on this key foundation of livelihoods can have enormous pay offs, if implemented well. The scenario exercise in Chapter 4 has demonstrated overwhelmingly the crucial importance of overhauling education and training systems to keep up with emerging trends.

However, access to quality education is an issue in many places around the world. In lower income countries, many children, and especially girls, do not even have access to primary education that could potentially be a powerful game changer in their lives, giving them a chance to escape poverty. In higher income countries where educational attainment is no longer an issue, quality is often the problem. Educational systems have not been able to ensure the competitiveness of graduates in the labour market or to keep pace with new social and employment trends. In many developed countries, educational reform is met with resistance from stakeholders such as educational institutions, regulating bodies, or labour unions.

Reforming education is a huge subject in its own right – space does not allow a full exploration here. There are many inspiring examples of reforms and good practices around the world on which to draw.[2] The OECD's skills strategy offers general principles for the best development and use of skills in economies (OECD, 2012b; UNESCO, 2013). Here we confine ourselves to outlining some ideas and principles for educational approaches which specifically target livelihood resilience and inclusiveness:

- Primary education should guarantee the best possible learning to everyone, to support the growth and development of each unique personality in all possible ways, as encouraged for example by Finland (UNESCO, 2007).
- Vocational education and apprenticeships are a good way to integrate young people into the business world and labour market. The principle is to provide dual education in which students who enter the technical education system after secondary school spend half of their time in an enterprise, with their curricula and programmes jointly defined by the relevant trade and business sectors. The German and Swiss models continue to be a source of inspiration for this approach (OECD, 2011b).
- Innovative practices, such as the development of MOOCs (massive online open courses), can bring education to potentially marginalised groups. Other initiatives also aim to reach such groups, for instance The Rockefeller Foundation's Digital Jobs Africa initiative, which aims to give computer-based training to one million disadvantaged young people over seven years in six African countries.[3]
- Moving away from single-subject and single-institution learning can enhance flexibility and resilience in a labour market that is increasingly globally integrated and competitive. There is a growing trend towards receiving training in multiple institutions throughout the world, and to mix disciplines. So for instance business graduates might study engineering, or natural scientists might study anthropology, and so on.
- Education should involve lifelong learning. In a world of high unemployment and fast-evolving technology, people need to constantly renew their skills and keep themselves informed if they are to stay employable. The shift towards a knowledge economy and technological advances increase the need for specific skills, especially as middle-level jobs are increasingly being automated (Chapter 3). These trends increase the demand for specialised tertiary education and lifelong learning.

- Resilient livelihoods require a myriad of pathways for skill acquisition. Access to information technologies is of the utmost importance for livelihoods, with increased mobility of the workforce and opportunities for employers and workers to reach out to the world for the right match. Many ICT-enabled learning platforms are currently being developed through private, public and joint efforts. However, what is lacking is an integrated platform that brings together a variety of education and training systems, as well as career mentoring systems. This would give individuals the opportunity to take personalised training courses, as well as to find out about job markets and the latest career opportunities. Participants at the Bellagio seminar proposed an online tutor and career mentor, "Plato", to create such a resource (Box 5.5).[4]

Box 5.5. Visionaries at work: Plato – an online tutor and career mentor for everyone?

Plato would be a worldwide platform offering a personalised tutor that guides and supports the individual in lifelong learning and career development. Enabled by IT, Plato's goal would be to provide all people with knowledge, networks, and skills to make a living throughout their lives in a changing world.

The Plato concept is an attempt to respond to the need for inclusion in education and work opportunities, the need for constant re-skilling to keep up with technological advancement, and the need for career management in an evolving global labour market. It would be an online personal and lifelong tutor and career guide for all. It would serve as an educational tool, but also as a guide on educational and work opportunities worldwide. Plato is not meant to substitute the formal educational system, but rather to supplement it by providing personalised assistance and reaching out to people who do not have access to the formal educational system. It would require, however, access to broadband and some basic training in using the platform. This issue would have to be overcome to ensure access to all.

Plato for education

As an educational tool, Plato would only require a tablet and Internet connection. Once online, Plato could offer all kinds of educational courses, ranging from pre-school to senior skills renewal. Plato could be used in schools as an audio-visual aid offering educational games and songs, personalised trial and error exercises, or as a testing device to check and evaluate children's progress. Although there are already many educational games, songs, films, and online tests available, many are dispersed around the Internet. Plato would centralise the best of these resources and help people to find the material that is most adapted to them. Some courses might be free, others would charge a fee.

Instructors and teachers could use Plato as a teaching tool. Although this requires instructors to have a minimum computer literacy and creativity in their teaching methods, access to teaching material and resources through Plato could tremendously improve their educational effectiveness. Where there is a lack of instructors or school coverage, such as in developing countries, children could be given Plato for self-learning. In such cases, Plato could be configured to have basic education courses already installed for children, in this way already ensuring a minimum level of educational material.

Plato for career management

Plato could also serve as a global career guidance tool. Depending on interest, competence and ambitions, Plato would offer questionnaires and search engines that lead to suggestions for career and education paths. Plato could provide information on different kinds of jobs that exist, statistics on recruitment and necessary skills or qualifications, and recent trends in different geographical locations. It could also give experienced and senior people information on new skills required to pursue or change their career. This could enhance the mobility of workers who are willing to move overseas.

Learning should involve livelihood skills

There is a pressing need to build awareness of livelihood sustainability, risks and resilience-building strategies among young people across the world. A global effort is necessary at the primary and secondary school levels to make young people more aware of livelihoods-related problems and possible solutions. This will require major media mobilisation across all channels, from traditional ones such as TV and the press to the Internet and social media.

Education should also be reformed to build basic capacity for livelihood maintenance and improvement – to help them meet their basic needs and cope with diverse challenges of a financial, social or environmental nature. This need inspired the idea of a Global Open University for Livelihoods during the Bellagio meeting (Box 5.6). This university would be designed as a virtual open platform to which all participants can contribute and share their experience. The first step in implementing this might be to start with a pilot involving a few key establishments and partners.

Box 5.6. Visionaries at work: The Global Open University for Livelihoods

The core idea of a Global Open University for Livelihoods is to diffuse information to anyone in the world on how to secure and improve their livelihoods. It would fundamentally be a virtual university, based on a network of key academic establishments that support its development. The university would revolve around three basic functions: education, research and advice.

Most of the teaching would be through teleconferencing and Internet-based information and courses following a MOOCs approach. Students can be both individuals and communities, although communities are particularly important. Face-to-face programmes and on-site training could also be organised by establishments involved in the network. Key materials are concrete experiences that have proven their efficiency. Topics are organised to meet the needs of different target groups: e.g. the rural poor, inhabitants of urban slums, migrants, and jobless people. For instance it might focus on skills that can reinforce individuals' resilience, such as recycling, home energy efficiency, better nutrition and health habits etc., as well as how to access and benefit from formal and informal jobs and social protection schemes. Both developed and developing countries would be covered. Certificates would be provided to students who have completed a defined cycle.

Participants could develop projects around the courses they attend. They might pay a fee to benefit from some coaching or on-site advice. Partnerships could be established with international (and national) organisations involved in relevant fields, such as Ashoka, the international social entrepreneur network (discussed in Chapter 3). Funding could be sought from foundations and international organisations.

Livelihood portfolios can ensure inclusive livelihoods

As full employment becomes an illusion for an increasing number of people, even in advanced economies, regulations and policies will need to change the way labour markets operate. Flexibility is key for helping people to adapt to rapidly changing job opportunities and conditions. Measures for promoting "livelihood portfolios" (see Scenario 5 in Chapter 4) made up of part-time work, paid training, and unemployment benefits can help individuals cope with fluid job situations. Longer working lives will also be necessary to accommodate ageing trends.

Although labour legislation is strongly influenced by country-specific cultures, values and traditions, there are lessons to be drawn from some Northern European countries.[5] Their experience shows that it is possible to maintain a dynamic labour market which provides enterprises with great flexibility to adapt employment to business cycles, while individuals benefit from broad support, including effective training to adapt their skills to market needs. This so-called "flexicurity" model has been particularly successful in Denmark.

Table 5.1. The impact of cash transfer programmes in a range of developing countries

Mexico	In 2012, cash transfer beneficiaries (*Opportunidades* programme) spent 26% of transfers on productive investments, especially livestock and micro-enterprises.
Brazil	The *Bolsa Familia* cash transfer programme enabled beneficiaries to increase their labour participation by 2.6% compared with non-beneficiaries.
Kenya	Income in the local economy increased by KES 1.58 for every KES 1 transferred through the OVC cash transfer programme.
South Africa	Recipients of cash transfers increased job seeking efforts and migration and were more successful in finding employment than non-recipients.
India	Public works created a multiplier of 1.77 in the wider economy for every dollar transferred.
Mozambique	Business was stimulated among the local traders surrounding transfer dispensing offices under the social transfer programme GAPVU.
Bangladesh	Cash transfers under BRAC (the Bangladesh Rural Advancement Committee) increased GDP by 1.15%, while its costs were 0.2% of GDP.

Note: KES – Kenyan shilling.

Source: Adapted from Slater, R. (2008), *Cash Transfers, Social Protection and Poverty Reduction (Draft)*, working paper, Overseas Development Institute (ODI), London, www.odi.org/publications/2738-cash-transfers-social-protection-poverty-reduction.

To achieve this will require good co-ordination among different government departments: employment and social affairs, education and training, as well as local development. Livelihood portfolios would also be supported through the following actions:

- ***Stepping up social protection.*** The need for the significant adaptation of social protection systems is a feature of all five scenarios in Chapter 4. Social protection needs are increasing all over the world. Yet, in developed countries and highly indebted states, social protection is being cut back because of fiscal constraints and pressures. Action is needed to get the private sector and individuals to share some of the cost burden.
- ***A basic income for all in developed countries.*** This sum would be paid to people regardless of their status or employment situation. This is obviously a very challenging proposal, but it makes sense in more than one scenario explored in Chapter 4 (e.g. Scenario 5: creative societies). The approach might be affordable in high-income countries and in some well-organised middle-income countries. It could be introduced gradually in high-income countries by building on and rationalising existing welfare programmes and expenditures – with the minimum

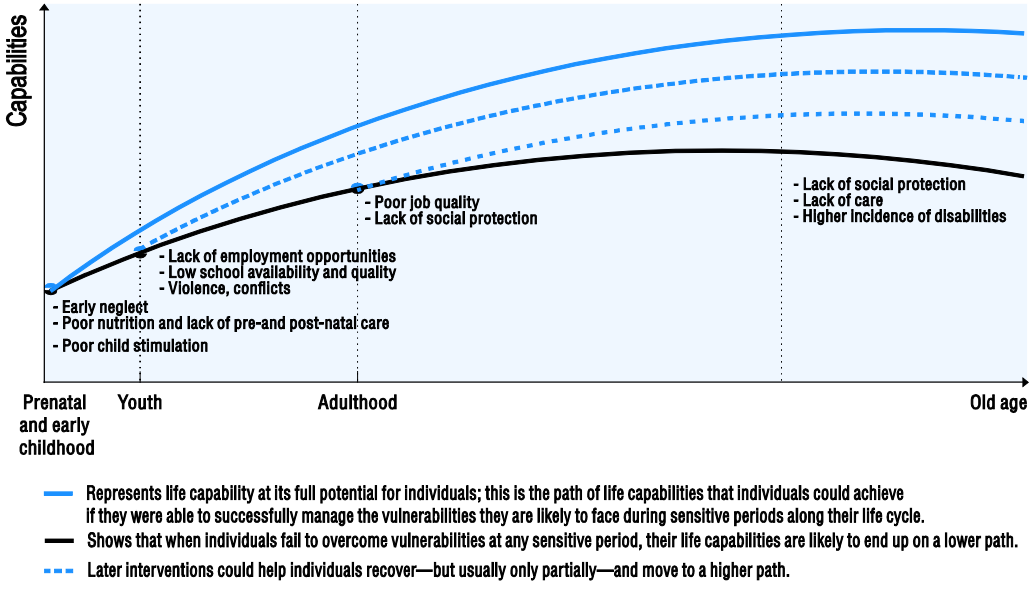
basic income being part of the livelihood portfolios described above. However, the establishment of social support systems including a basic income for all would require a general reorganisation of tax systems, including the introduction of a negative income tax: a progressive income tax system where people earning below a certain amount receive a supplement from the government instead of paying taxes to the government (Friedman, 2002).[6]

- ***Cash transfer programmes for developing countries.*** An effective approach in medium and low-income countries is the use of large-scale cash transfer programmes. These involve lump sum payments to individuals who meet certain conditions, such as sending their children to school. When well-designed and managed, these cash transfer programmes can have a significant impact on livelihoods and economies (Table 5.1).

Investing in key age groups will pay dividends

It appears of crucial importance to provide support to the entire cohort of certain critical age groups. For example, it is vital that young children receive basic health care, nutrition, and education (Figure 5.1). Deprivation in early childhood has many negative consequences for future well-being. Children who lack basic nutrition and healthcare do poorly in school, and are more likely to drop out. Gaps in skills open early. A study has shown that poor children are already at a vocabulary disadvantage by the age of six. Alleviating the worst effects of poverty and deprivation, and breaking the intergenerational cycle of poverty, gives children a better chance.

Figure 5.1. When investments in life capabilities occur earlier, future prospects are better



Source: UNDP (2014), *The 2014 Human Development Report – Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience*, Human Development Report Office, United Nations Development Programme, New York, http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf.

Youth (age 15-24) is another key stage of life which can influence future livelihoods. What young people learn in school and the skills they acquire will have a major impact on their lifelong career. However, the young are particularly affected by unemployment – almost three times the adult rate (Chapter 3).

Investing in young people is critical and brings high returns for social and economic development (UNDP, 2014). The youth bulge in developing countries offers an unprecedented opportunity to enhance human capital to create a large, well-educated and potentially productive labour force. Failing to seize this opportunity represents a considerable loss of potential that not only threatens economic progress, but also raises the risk of social unrest. One controversial scheme, which could – together with other initiatives – help unleash the potential of global youth could involve a universal self-investment grant for young people (Box 5.7). This idea emerged in Bellagio and would need much more thinking through before it could be implemented. However, the core ideas could be adapted for other possible initiatives.

Box 5.7. Visionaries at work: A universal self-investment grant for young people?

Personal self-investment grants offered to the entire youth age cohort (ages 15-24) would be a way of investing in young people and at the same time making them more responsible for their own lives. This would enable young people to make their own decisions on the use of these grants.

The grant conditions could vary by a country or locality's characteristics, but might include linking grant payment to school completion. This would function as a non-reimbursable scholarship grant, which imposes the condition of school completion. Alternatively, countries might prefer to apply a completely universal, unconditional grant.

The size of the grant will also depend on each country. Grant amounts could vary depending on per capita income or else they could be fixed amounts. They could also take the form of a lottery in countries with financial constraints. The financial resources needed for such a system could be supported by international financial institutions, or private donor organisations in the form of private-public partnership programmes.

Many other innovative support mechanisms are possible. For example, reducing the costs charged to migrants to send money back to their home countries would have an important impact on livelihoods. Charges are currently as high as 10% of the amount being sent. The G20 is working on this initiative (G20, 2014). Another idea is to provide a kind of "key person insurance" for large family structures that are supported by one person whose death or disability could be financially devastating. More generally, there is a need to develop better non-government insurance and pension mechanisms to support people in the informal economy.

People's creativity, boosted by new technologies, requires appropriate support

The new "Industrial Revolution" offers considerable opportunities for the public at large to express its creativity and contribute to the development of new activities and jobs. Today anyone with an innovative idea can download files for services that can manufacture products in various quantities, and people can even manufacture items themselves thanks to 3D printers. A new 'age of makers' has come (Anderson, 2012).

Governments should rethink their innovation policy support accordingly. In addition to the support they traditionally provide to high tech inventions coming from advanced

laboratories in universities or industry, there is a need to provide support to a large basis of potential innovators operating in schools, factories, or garages. There is a need to multiply innovation workshops, such as the so-called "FabLabs", along with efficient business incubators in which innovators can find commercial, technical, legal and other forms of assistance. This action should be implemented through close co-operation with local and city authorities (see section below). Some governments in OECD countries have already set up schemes to stimulate and reward bright ideas coming from people and organisations at large, e.g. the UK government with the Nesta foundation.

This trend is supported by the growth of crowd-funding (see Box 5.8), which is dramatically changing the conditions in which individuals and communities can fund the development of their ideas and projects. The crow-funding movement is increasingly spreading in developing countries and may dramatically change the innovation landscape in those countries, along with the rapid expansion of mobile services that are impacting commerce and finance and other sectors, such as health.

Box 5.8. Crowdfunding is gaining influence

Crowdfunding was given a boost in the wake of the financial crisis as a way for entrepreneurs to raise capital in a context where banks were less willing to lend. It enables entrepreneurs to raise funds in the form of donations or investments from multiple individuals. Kick-starter, for instance – the market leader in pledge or donation-based crowdfunding – has channelled over USD 815 million from 4.9 million individual donors throughout the world since 2009.

Crowdfunding has so far developed in more advanced economies, as it requires some enabling factors, such as a regulatory environment, social media market penetration and Internet availability, a regulated online marketplace that facilitates capital formation, and collaboration with other entrepreneurial events and hubs including business plan competitions, incubators and academic institutions.

However, crowdfunding could also become a useful tool in those developing countries, particularly emerging economies, where the right conditions are in place. Crowdfunding offers the potential to leapfrog the traditional capital market structures and financial regulatory regimes of developed countries. In China, for instance, crowdfunding could reach USD 50 billion by 2025.

It is estimated that there are now up to 344 million households in the developing world that are able to make small crowdfund investments in community businesses. These households have an income of at least USD 10 000 a year, and at least three months of savings or three months savings in equity holdings. Together, they have the ability to deploy up to USD 96 billion a year by 2025 in crowdfunding investments.

Source: infoDev (2013), Crowdfunding's Potential for the Developing World, Information for Development Program, The World Bank, Washington DC, www.infodev.org/infodev-files/wb_crowdfundingreport-v12.pdf.

Green growth underpins resilient livelihoods

While global agreement is needed to create a framework for tackling climate change, it is action at the national and local level that will make much of the difference. The adaptation to, and mitigation of, climate change require large and varied efforts.

The Global Commission on Economy and Climate (2014) lists priorities for action, including:

- *Constructing greener cities:* they would be cheaper to build, and this would be particularly important in the developing world, overwhelmed by rural migrants.

Well-designed eco-cities would offer better quality of life, provide jobs, and help in the fight against climate change (see the next section).

- *Repairing farmland:* feeding a world of 8 billion in 2030 will be a challenge. Increasing the productivity of existing agricultural land will be key. It is estimated that if one eighth of the world's degraded agricultural land were restored using modern techniques, it could feed 200 million more people and reduce greenhouse gas emissions. The proposal for a Green Revolution 2.0 responds to this objective (Box 5.9).
- *Developing renewable energy sources:* the costs of producing renewable energy, especially solar and wind power, have fallen rapidly. Low-carbon energy could account for more than 50% of global electricity generation within the next 15 years. The fall in oil prices, however, driven by the development of shale oil in North America, has disrupted this transition towards a low-carbon economy. It is nevertheless essential to keep moving in this direction. More efforts are also needed in energy saving and efficiency, and improving the energy productivity of economies.
- *Reducing fossil fuel subsidies:* globally, fossil fuel subsidies amount to USD 600 billion, while subsidies for clean energy amount only to USD 100 billion. Subsidies need to be switched from supporting fossil fuels to supporting clean energy. However, at the same time lowering the cost of energy for the poor in the developing world is vital. Subsidy reform must therefore be accompanied by appropriate compensation to avoid damaging livelihoods. Otherwise it could be a source of major social unrest and political disturbance, as already experienced in a number of countries.
- *Funding a low-carbon world through green bonds:* the lack of public financing and support for low-carbon infrastructure means that capital is not allocated to sustainable infrastructure, including low-carbon transport and industries. Financial instruments such as green bonds and risk sharing using public-private partnership programmes could significantly cut the cost of capital for sustainable growth. Green bonds are high-rated and generally tax-exempt bonds, which are issued by public authorities or international financial institutions for the development of low-carbon infrastructure.[7]

Box 5.9. Visionaries at work: A new livelihood-focused Green Revolution?

The Green Revolution more than doubled cereal production in developing nations between 1960 and 1985, with yields of rice, maize, and wheat rising steadily during that period. At its core was the development by agronomists of novel wheat, maize and rice cultivars generally referred to as HYVs or "high-yielding varieties", which significantly out-perform traditional varieties in the presence of adequate irrigation, pesticides, and fertilisers (especially synthetic nitrogen fertilisers).

The results were impressive, especially in Asia where cereal self-sufficiency was attained at a national level by many countries despite soaring populations. India even became a rice exporter. The Green Revolution was supported by a coalition of foundations, bilateral and multilateral donors, and substantial World Bank funding for fertiliser plants and fertiliser import programmes. It had its own *ad hoc* institutions, such as the Consultative Group on International Agricultural Research (CGIAR), which federated research institutes working on HYVs across the world.

Box 5.9. Visionaries at work: A new livelihood-focused Green Revolution? (*cont.*)

Spectacularly successful as it has been in terms of boosting food supplies across the developing world, the Green Revolution did not focus on livelihoods *per se*. In fact, the increased level of mechanisation on larger farms made possible by the Green Revolution removed a significant source of employment from the rural economy. The monocultural system associated with HYVs caused the polycultural system associated with traditional varieties, and smallholder agriculture at large, to recede in many places. Local self-sufficiency decreased, while dependency on energy, purchased seeds and other inputs, and third party logistic services increased – generally accompanied by an increased dependency on credit. This, as well as lower food prices due to the vastly increased production volumes, often led to economic difficulties for smallholder farmers and landless farm workers, leaving many of them with rural-urban migration as their only livelihood alternative.

The major emerging labour market, fiscal, energy, environmental and climate challenges ask for a greater emphasis in agriculture on the concept of livelihoods, including on job creation and greater self-sufficiency as well as livelihood resilience. Could a possible successor to the Green Revolution – in the form of a Green Revolution 2.0 – be the way forward?

New technologies that could have hardly been imagined at the time of the Green Revolution could provide a path towards a Green Revolution 2.0. The new technological factor at the heart of the Green Revolution 2.0 is "information": using information for (1) adapting new agricultural business models to local soil, water, and social conditions; and (2) optimising these models for the highest possible performance and efficiency.

In this respect, a Green Revolution 2.0 would be a logical offspring of the ICT revolution that has changed the world over the last 30 years. What's more, many of these technologies have become, or are rapidly becoming, affordable even at a village or community of villages level, in large part thanks to the zero marginal cost, economy-of-sharing features that many of them display.

These new technologies and approaches could make several contributions towards the objective of improved, more robust and resilient livelihoods by:

- increasing food production on existing farms, using technologies that contribute to drought and disease-resistant crops and adding to the Green Revolution's achievements on the cereal front
- re-developing more localised, self-sufficient and resilient agricultural ecologies, for cereal and non-cereal crops alike. At an extreme, they could mark the return of, or a move towards, smallholder agriculture, garden plots, and more autonomous community agriculture
- creating more local jobs through (1) the more intensive, fine-tuned nature of the type of agricultural production and work involved, and (2) employment in related activities such as renewable energy services, 3D printing, seed management, metering and billing, fertiliser mix optimisation, hydroponic systems maintenance, and drone servicing.

In this sense, the Green Revolution 2.0 would be more intensely livelihoods-focused than its predecessor. It would help individuals, families and communities support themselves by providing scope for new jobs and more food resources now, while increasing their local food self-sufficiency and resilience (including through a wider diversity of crops) over the long haul.

Local initiatives are central to inclusive and resilient livelihoods

While support at the national level is needed, it is increasingly up to individuals and communities to take action and experiment with options for making their livelihoods more resilient. The scenario exercise in Chapter 4 illustrated how anticipatory and preparatory action may reduce the negative effects of crises on livelihoods. It also showed how creative individuals can evolve societies towards new and potentially more sustainable and inclusive forms of living and working. Some such initiatives are already occurring on a small scale, in both developed and developing countries, as described in this section.

New ways of organising the local economy should be encouraged

Social and solidarity-based forms of economy (as opposed to capitalism) are key in the new and adaptive regimes that are gradually taking shape, as noted in scenarios 4 and 5 in Chapter 4. In France, for instance, it is estimated that the *économie sociale et solidaire* (socially and solidarity-oriented economy) represents 6 to 8% of GDP and about 10% of private sector employment (Le Nouvel Observateur, 2014). Key drivers of this social economy are "social entrepreneurs", who introduce a wealth of services, notably for the poor, the disabled, and the marginalised. But wealthy people can also benefit from creativity and engagement. Governments can do much to facilitate and encourage their activities through fiscal arrangements (including for those who benefit from their activities – their employees as well as their clients). They can also help to scale up their operations when successful.

Another area that deserves particular attention for livelihoods is the development of a "barter, experience or share economy" – described in Scenarios 3, 4 and 5 in Chapter 4. Structuring and regulating these new forms of economy, with clear rules of the game for the demand and offer of services and conditions of transactions, will be important as the market expands. The ageing of populations in the developed world offers opportunities for the development of new, local activities adapted to the needs of older people in health care and leisure (among other things). There are also opportunities to take advantage of knowledge and know how accumulated from people with a life-long professional experience. Transfer of experience can take place in the context of some forms of barter economy, while enterprises and organisations can establish internal mechanisms and incentives to facilitate inter-generational transfers of knowledge and know how. National and local traditions and culture will have important influences on these matters, and this will be reflected in related legislation.

On another front, it is important to promote trade-related innovations such as service marketplaces, which correspond well to aspirations and needs for open and flexible exchanges of work. This is an area that is currently booming for localised services, notably for specialised services such as Uber for taxi services, where rides are matched through a mobile phone application. Partly due to a lack of regulation, Uber can charge lower fees than some traditional taxi services.

A project proposed at Bellagio envisages an international service market place – a kind of eBay for services. It may develop as a global platform which brings together existing local services. It could possibly be developed through a public-private partnership. The public dimension would be useful as a way to introduce quality control and assurance, based on feedback from users.

Local financial initiatives can boost livelihoods

The provision of micro-finance to people who want to develop their own businesses has proven to be a very efficient way of combatting unemployment. It can be much cheaper than the costs of supporting the unemployed through public services (Attali, 2014). New ways of accessing micro-finance range from the use of ICT platforms (such as M-Pesa, a mobile phone-based money transfer and micro financing service)[8] to new styles of group lending, micro savings, micro finance, crowdfunding (see Box 5.8) and local currencies.

Key challenges are to develop mechanisms for funding start-ups that cater to the needs of low-income populations as well as new technology ventures, both of which have trouble attracting traditional finance. Venture philanthropy funds, although still modest in volume, offer interesting possibilities from this viewpoint and could be boosted by appropriate tax incentives. These funds, managed in a professional manner, finance an increasing number of projects in developing countries, with a fair rate of success (IFC, 2013).

The development of local and complementary currencies can also be a useful way to improve the resilience of local economies. Local currencies are used among defined communities (cities, enterprises affiliated to a specific sector, or network, etc.), and complement traditional money for specific uses. Some analysts consider this the best way to stay away from the turbulences and crises inherent to the globalised financial system (Lietaer, 2001). There are currently more than 5 000 such local currencies operating throughout the world. A number of international complementary currencies, such as the "Bitcoin", are also growing in importance.

Some local, complementary currencies have been in operation for almost a century. This is the case of the Swiss WIR, a currency established in the 1930s at the time of the Great Depression, and which is now used by more than 60 000 enterprises. It helps in transactions among various actors involved in the production and delivery chains, facilitating conditions of payment, notably when economic conditions are tense. This system is considered to have played a critical role in smoothing the functioning of the Swiss economy during times of crisis. Some governments have promoted the development of such systems nationwide, e.g. in Uruguay, in order to strengthen the small and medium-sized enterprise sector. Local currencies are particularly adapted to local exchanges between individuals and providers of local products and services.

Social impact investments should be scaled up

When state budgets are tight, efficient public-private partnerships (PPPs) can help mobilise private and business money for better-managed investments, thanks to greater experience in business practices. PPPs have traditionally been used for large infrastructure projects, but are increasingly getting involved in smaller scale operations with social purposes, through "social impact investments". These involve private businesses investing in public interest activities against the promise of being repaid later by high-return social bonds funded by public authorities. They have proved very useful in certain countries, such as the UK for improving public services, including prisons, with a guarantee of efficiency and effectiveness and best value for money. This approach could be encouraged for improving many services and infrastructure that concern basic needs and are crucial to poor and deprived populations, e.g. health care, shelter, sanitation, and possibly education. They can apply also to the environment, in the form of "green bonds" (see discussion in previous section).

Cities of the future should be green and resilient

As noted in Chapter 3, 60% of the world's population is likely to be living in urban areas by 2030, and developing countries will see the greatest urbanisation growth. However, in many cases, urban growth is poorly managed, generating significant economic and social costs in providing infrastructure and basic services, along with problems linked to air pollution, inefficient energy consumption, increasing social exclusion, etc. (see Chapter 3).

Green cities address both issues – economic activity and environmental systems – at the same time. Cities are critical drivers of economic growth, being where most jobs are created. The building of such eco or green cities in the developing world would be of crucial importance, as discussed in Chapter 4. Drawing on the experience accumulated in a number of countries from various parts of the world, it is recommended to draw up plans for renovating cities in developing countries – as well as for building new "eco cities" that would respond to their ecological challenges and create a significant amount of activities and jobs for large contingents of people, particularly youth entering the labour markets and rural migrants.

Some measures can enhance resilience, reduce emissions, and boost jobs and growth at the same time. For example, investment in green space and efficient waste management bolsters climate resilience, absorbs carbon, and enhances the attractiveness of cities to global talent and capital. While the benefits of economic density have to be balanced against the potential risks of increased exposure to shocks such as climate hazards (Rockefeller Foundation and USAID, n.d.), there is evidence that more compact, connected and better co-ordinated cities can also be more resilient (see, for example, OECD, 2013b). In that respect, The Rockefeller Foundation's "100 Resilient Cities" project provides an interesting example of a global network of cities aiming at developing a roadmap to resilience.[9]

With the rising incidence of climate-related hazards impacting urban areas, it is crucial that cities invest in enhancing their resilience to ensure they can withstand the shocks of future extreme events, minimise the damages, and recover quickly. Coastal cities are at particularly great risk. The OECD analysed the climate risks faced by the 136 port cities globally with more than a million residents in 2005, and found they had about US$3 trillion worth of assets at risk in 2005, or about 5% of global GDP that year; by the 2070s, that is expected to rise to US$35 trillion, or 9% of projected global GDP. The most exposed cities as of 2005, the study found, were Mumbai and Kolkata in India; Guangzhou and Shanghai in China; Miami, Greater New York and New Orleans in the US; Ho Chi Minh City in Vietnam; Osaka-Kobe in Japan, and Alexandria in Egypt (OECD, 2013b). Sound urban management can reduce vulnerability to climate hazards – for example, through better planning to restrict development in the most exposed locations. Transport systems, utilities (e.g. energy, water) and buildings also need to be made more resilient, and basic infrastructure such as sewers needs to be well maintained.

Some cities, driven largely by the use of technologies, are already starting to show examples of greener growth. Smart transport systems are developing. Bus Rapid Transit systems, for example, allow for the redistribution of road space in favour of buses through dedicated bus lanes, pre-boarding ticketing and custom-designed stations. They can reduce traffic congestion, carbon emissions and air pollution. They have already been introduced in 160 cities including Bogotá, Guangzhou (China), Ahmedabad (India). Other innovations include electric and hybrid buses, an electric taxi fleet, and car sharing (The Global Commission on the Economy and Climate, 2014).

Citizens should be engaged in policy-making processes

Citizen trust in government action has to be rebuilt in many countries. A good way forward is to engage citizens themselves in game-changing actions. The impressive development of philanthropic activities in which individual donors are actively involved in the targeting and control of the use of their funds, show the potential benefits of such engagement. There are many areas where such mobilisation can take place, as long as people can see tangible results from their engagement.

A key level for this is precisely the city level. By adopting new practices that first demonstrate to citizens the value of their actions and secondly have "contagious" positive effects on the wider community, they can help to solve many local issues, from health care to crime prevention and environmental management. A good example occurred in Bogotá in the late 1990s. Citizens took part very efficiently in coping with water shortages caused by damage to a water tunnel feeding a large part of the city, thanks to diverse water saving practices inspired by creative campaigns launched by the municipal authorities (World Bank, 2014).

Communities can work in close collaboration with a range of government departments, in a well co-ordinated manner. Joint efforts may include income earning and learning centres where individual can collaborate and contribute towards work for all. Volunteer work options, in which individuals receive government subsidies for some social contributions to society, include planting village gardens, improving infrastructure, restoring ecosystems, or tutoring on job creation schemes.

A call for action

The challenges ahead are considerable: youth bulges in developing countries, ageing populations in developed countries, rising unemployment in many parts of the world, increasing inequalities, persisting financial fragilities, enduring or new conflicts, accelerating climate change; all these trends will dramatically affect livelihoods in the coming decades. However, at the same time they could also be turned into opportunities for innovation, through attempts and experiments to find better ways of coping with challenges and difficulties. Such innovations or experiments could be technological but also social, implying new modes of consumption and production, and new forms of organisations or institutions.

There is a need for all relevant players – international, national, local – to move forward and prepare to ensure a better future for livelihoods. At policymaking level, foresight and scenario exercises can be a useful and powerful tool to make practitioners more aware of the broader challenges and opportunities, and encourage them to imagine appropriate policy responses and strategies that could be later implemented and scaled up.

Policy experimentation will often be necessary, especially for the bolder and more controversial actions. New schemes can be piloted, new approaches can be tested, and new instruments can be prototyped with specific groups, in "living labs" and other places. Rigorous methods, inspired by behavioural sciences, are available today for conducting economic and social experiments, including some on a large scale, to ensure the appropriateness of policy approaches.

Once experiments have proven the validity and utility of new ideas, it should be easier to scale them up. Success stories should help convince institutions and established powers to commit to necessary funding and take regulatory and legal measures needed for transformational change. This would be facilitated if coalitions of change makers have been built, including at the international and global level.

It is in this way that true transformative approaches can take shape and improve, increase, protect, or save the livelihoods of people around the world. Billions of individuals are affected: the poor but also the richer classes; in the developing world but also in the developed. It is in the self-interest of both major and minor players to take action and lead the way. There is plenty to be done and many places to start. Coalitions of interested stakeholders should come together to start this process. Others will catch up and the momentum will grow.

Notes

1. See more at www.gavi.org.
2. WISE (the World Innovation Summit for Education) offers a wealth of good practices across the developing world (see www.wise-qatar.org). Such experiences cover many fields: efficient ways to provide places for poor children in primary and secondary schools, the provision of minimal education to migrants and displaced people, the mobilisation of schools to solve local community issues and develop vital skills, etc.
3. See www.rockefellerfoundation.org/our-work/current-work/digital-jobs-africa/impact-sourcing for more details on the initiative.
4. The name is inspired by a pioneering initiative of a computerized teaching system developed in the 1960s at the Illinois University, and entitled "Programmed Logic for Automatic Teaching Operations" (Plato). The concept and tool were further refined by the Control Data Corporation, and tested in the US and South Africa. The latest incarnation appeared online in 2004 (Source: Wikipedia, accessed 22 January 2015).
5. See www.lasselehtinen.net/content/view/149/100/lang,en.
6. For an interesting discussion on the idea of a basic income for all, see the following article in The New York Times: http://economix.blogs.nytimes.com/2013/12/10/rethinking-the-idea-of-a-basic-income-for-all.
7. See http://treasury.worldbank.org/cmd/htm/WorldBankGreenBonds.html for the World Bank's Green Bonds, for example.
8. M-Pesa (M for mobile, pesa for money in Swahili) was launched in Kenya and Tanzania in 2007 by Vodafone for Safaricom and Vodacom, the largest mobile network operators in the two countries (Saylor, 2012).
9. See www.100resilientcities.org.

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