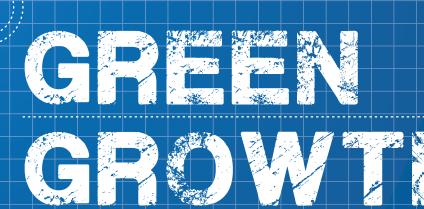
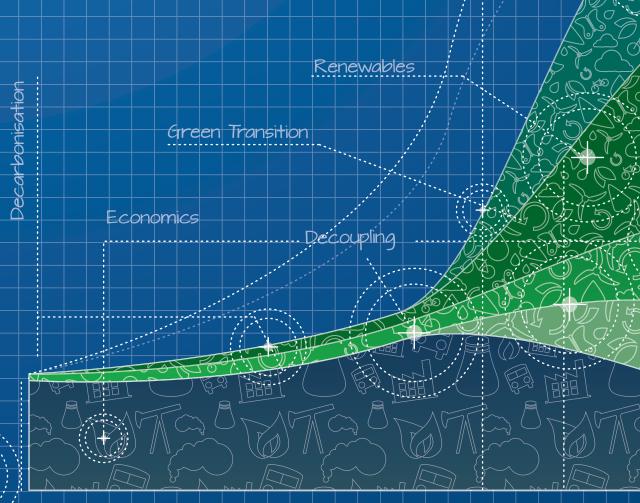
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A BLUEPRINT FOR THE FUTURE?



Innovation

Education for a 'green' economy

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highlight the vital role of education in the transition to a 'green' economy.

E conomic recessions have regularly been used as an excuse for delays in the implementation of ecological reforms, which are said to be costly and an impediment to growth. However, the recent findings of the International Labour Organization (ILO) suggest that the current recession provides further reasons for the need for a 'greener' economy. According to a new report led by the Green Jobs Initiative, the transformation to a 'greener' economy has the potential to create up to 60 million additional jobs worldwide over the next two decades¹.

The transition to a 'green' economy requires new technologies, which have to be invented, developed and applied, and each of these steps demands specific skills. Meanwhile, millions of jobs are threatened globally by the rapid decline of natural resources due to the growing world population and increasing production and consumption. The sectors most affected are agriculture and fisheries, because of decreases in fertile land and fish stocks. Other sectors will be affected by the combination of a high dependence on fossil fuels and rising energy prices due to the increasing scarcity of the latter.

Traditionally, environmental protection has focused on changing the behaviour of individuals. This alone is not enough to stop the over-consumption of resources, and could also be said to be inefficient. A much larger impact in environmental protection would be achieved by targeting big companies, to encourage them to set up corporate environmental management policies and increase resource and energy efficiency in production. In other words, it takes a 'green' economy to protect the environment. 'Green' economy, as the United Nations Environment Programme (UNEP) makes clear, "does not replace sustainable development; but there is a growing recognition that achieving sustainability rests almost entirely on getting the economy right"².

A ROADMAP FOR 'GREEN' ECONOMY

In many countries, Switzerland among them, the concept of a 'green' economy is gaining ground. It has become clear that "the current economic structures, rules and activities are not able to respond to these challenges in a way that leads the world into a sustainable future"³.

As a consequence, the Swiss federal government is actively seeking to improve resource efficiency in consumption and production through 'green' economy initiatives⁴. In preparation for the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012 (Rio+20), the Swiss delegation commissioned a proposal for an international 'green' economy roadmap. The concept of this roadmap arose during the discussions



of 'green' economies in the context of sustainable development and poverty eradication. Switzerland's aim was to obtain the commitment of countries to develop a national 'green' economy action plan³.

The proposal contained measures in specific and relevant areas, including market and trade transparency with respect to sustainable product information, a fossilfuel subsidies reform, sustainable public procurement, sustainable agriculture, food security, sustainable energy, resource-efficient and cleaner production methods, and education for a 'green' economy'. This last point is of particular importance, since qualified professionals are essential for the implementation of any measure or step towards a 'green' economy. Professional experts are required not only for the development of 'green' products but also to provide the knowledge of how to construct and use these products. General knowledge about sustainable development at all educational levels is necessary to increase acceptance of a transition and to lay the foundations for innovation.

In Switzerland's proposal, the main objective is to promote 'green' economy skills in relevant education, thereby leading to a mainstreaming of 'green' economy and fostering innovation at all levels³. The following is a summary of the proposed measures.

'GREEN' SKILLS FOR 'GREEN' JOBS AND POVERTY ERADICATION

Initial and continuing vocational training are key to establishing professional skills in a 'green' economy, to improve the employability of workers and create new jobs in 'green' markets, thereby promoting welfare and helping to fight poverty. 'Green' skills need to be integrated in education and training programs for teachers and instructors working in vocational education and training (VET) and tertiary-level professional education and training (PET). The nature and the strength of the respective national vocational training systems will be taken into account when trying to integrate green skills into education and training programs, and therefore the different kinds of education systems in the respective countries need to be considered as there is no 'one-size-fits-all' recipe for the integration of education for sustainable development into a national education system. VET and PET play a very important role in the Swiss education system, but that is not necessarily the case in other countries. The goal is to teach as many workers and students as possible in green skills. This step may require assistance from experts in 'green' economy, particularly in countries with high unemployment rates, emerging economies and BRICS countries (Brazil, Russia, India, China and South Africa).

For best results, economic, labour, educational and youth policy strategies for a 'green' economy are to be coordinated on regional, national or international levels. The ILO, 'green' skills departments, the European Centre for the Development of Vocational Training (CEDEFOP) and others may serve as centres of excellence.

SUSTAINABLE UNIVERSITIES FOR A 'GREEN' ECONOMY

The aim is to promote those qualifications that help to shape a 'green' economy and support the development of sustainable economic models. One way is to promote University Leaders for a Sustainable Future (ULSF) and other university and student initiatives at a global and national level. University leaders would commit to establishing the concept of a 'green' economy in teaching, research and innovation. Strategies, accreditation tools, curricula, research and operations are to be developed with a view to their contribution to a 'green' economy in all academic fields relevant for sustainability, such as management and business administration, finance, engineering, architecture, agriculture, forestry and traffic engineering.

All of this could be promoted by the creation of an international network for 'green' economy universities, and the results could be measured by regular UN/UNEP sustainability rankings of the ten big global players in MBA university rankings. MBA university rankings should have integrated 'green' economy standards into their list of criteria by 2015.

'GREEN' ECONOMY SECTOR TRAINING AND KNOWLEDGE TRANSFER INITIATIVES

Since education is so important for the transition process, it should not be neglected when 'green' investments are made, and therefore investments in education should make up a substantial part of the investments in 'green' economy. Education and vocational education and training need to be integrated into 'green' economy sector programmes. Improvements in this sector should be monitored and assessed along with other 'green' economy investments.

Measures to boost investments in 'green' economy sectors are innovation incentives for professional associations, science and technology transfers between universities and professional associations, and information transfer to trade unions and wider society. Another initiative would be to strengthen partnerships between global and national companies and NGOs through conferences, workshops, events and round tables on environment, development, consumption, and trade union issues.

BUSINESS TRANSFORMATION FOR A 'GREEN' ECONOMY

Human resources consultants should be encouraged to complete training programmes for change and transformation processes towards a 'green' economy. Training outcomes can be measured by the Green UN/ UNEP ranking of the ten big global players in business consulting and of the ten biggest associations of business consultants which is due to be implemented.

Concepts like 'green' business leadership, 'green' business consulting and sustainable human-resource (HR) development need to find their way into the guiding principles of global, national, and regional companies. Training programmes for business consultants and leaders of global and national companies will invigorate their commitment to implementing plans for a 'green' economy. This commitment is crucial, since without the approval of business leaders, 'green' economy plans are unlikely to succeed.

SOURCES

- ILO (2012) Transition to green economy could yield up to 60 million jobs, ILO says. Press release 31 May 2012, ilo.org/global/ about-the-ilo/newsroom/news/WCMS_181795/lang--en/ index.htm.
- 2. UNEP (United Nations Environment Programme) (2011) *Towards* a Green Economy: Pathways to Sustainable Development and Poverty Eradication. UNEP, Nairobi. www.unep.org\ greeneconomy\\GreenEconomyReport\\tabid\\29846\\ Default.aspx.
- Swiss Confederation (2011) Submission by Switzerland for UNCSD 2012 (Rio+20), Reference K402-0239. UNCSD, New York. www.uncsd2012.org/rio20/index.php?page=view&nr=209&type =510&menu=20&template=509&str=green%20economy.
- Federal Office for the Environment FOEN (2011) Green Economy. www.bafu.admin.ch/wirtschaft/11350/index.html?lang=en (Accessed 2 November 2012). HM Treasury (2011) Budget 2011, HC 836. The Stationery Office, London. cdn.hm-treasury.gov. uk/2011budget_complete.pdf.

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