



The Donor Committee for Enterprise Development

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Green Value Chains to Promote Green Growth

The DCED Green Growth Working Group (GGWG) aims to generate and share knowledge, and raise awareness, on private sector contributions to green growth. This document, developed by the GGWG under the auspices of ILO, is part of a series of fact sheets that introduce different green growth approaches and illustrate relevant development agency activities. They also aim to spur further engagement and in-depth discussion on green growth issues and with the GGWG. For further information, visit the GGWG's page on the DCED website at www.Enterprise-Development.org/page/ggwg, or contact the DCED at aarons@Enterprise-Development.org.

The Challenge

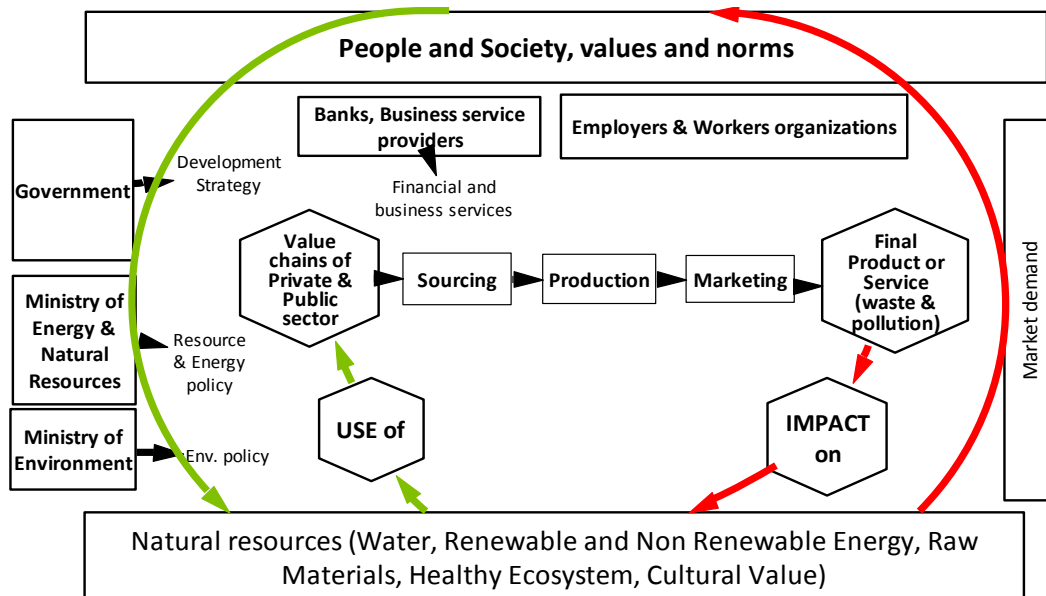
Today, more and more products and services pass through global value chains to reach the end consumer. The goal of optimizing productivity at each level of the chain anywhere in the world is to impact on natural resource use at different stages. It is through value chains that resources ultimately 'start', as they are transformed or used as inputs - like energy and water - and 'end', back in the same natural environment through final disposal and pollution. Thus, value chains – just like natural resource use - are no longer conceived in linear terms and as local processes, but instead viewed as circular and operating at a global scale.

The aim of a green approach to Value Chains is:

- i) to ensure the sustainable use of natural resources and to increase the share of renewable and recycled resources at the input side of the value chain,
- ii) to maximize material- and energy efficiency at each stage of the process, and
- iii) to reduce negative environmental impacts as outputs at all points of the chain.

The Response

Green Value Chain Development is a systemic approach, integrating environmental support functions, environmental rules and regulations and market players in greening the value chain. It transforms the conventional linear view of value chains into a cyclical system view in which value chains operate in the natural environment on which they depend and which they also affect. The environment in broad terms - or environmental goods and services in a more narrow perspective – is integrated in the value chain approach as the starting point of products' and services' conception and as the final recipient of end products, besides functioning as a recycler and a supplier of renewable resources.



The development of green and greening value means optimizing the economic and social outcomes within a closed loop system in an environmentally sustainable manner. It takes its inspiration from biological ecosystems in which natural resources are used in an equilibrium with supply and absorption capacity, in which one organism's waste is food for another organism and in which the total number of value chains aggregates to a global life cycle economy.

The Results

In its simplest form, Green Value Chain Development aims to improve the overall natural sustainability of the entire chain by optimizing links between actors. At every stage efforts focus on rationalizing the natural inputs into the value chain and controlling the outputs affecting the natural environment. In relation to inputs, this includes improving efficiency and renewable capacity in terms of water, energy, material, building, land and tools. In relation to outputs, the approach focuses on wastage and pollution, drawing on methods of pollution control, cleaner production, eco-efficiency, life cycle assessment, closed loop production and industrial ecology.

Green Value Chain Development also refers to the promotion of green market opportunities, where economic benefits from the use of renewable resources are maximized while environmental harm is minimalized. Green value chain interventions also include supporting the creation of an enabling environment for green investment, skills training in green technologies, green entrepreneurship and business development, and greening the workplace. A mix of policy instruments including eco-labeling, green public procurement, green cluster networks, environmental taxes, tradable permits, subsidy reform, green regulations, norms and standards are promoted.

The Examples

A central instrument for Green Value Chain Development is the initial assessment which. Several Green Value Chain Assessments have been undertaken around the globe. Examples include:

- **Assessment of greening the global cut flower chain, Ethiopia:** It is expected that greening of the flower chain will add economic value, notably through productive use of organic waste and increased employment, while having pro-poor effects, notably for women. In comparison to capital intensive plants, low-cost and labor intensive eco-briquette and organic fertilizer production could provide more jobs, clean energy and increase soil productivity. Sustainable resource and water shed management and a 'green code of practice' could position Ethiopia's flower sector as environmentally responsible. This could open new direct sales, notably in Scandinavia and Switzerland, and help diversify sales in an increasingly saturated European market, while ensuring economic viability of expansion plans.
- **Assessment on greening the global cocoa chain, Ghana:** One of the underlying root causes for low productivity of cocoa and hence deforestation has been identified to be the land tenure system. Due to earning only a share of the profits, neither the owner nor caretaker have enough incentives to increase productivity. Facilitating inter-generational contracts to give young people access to land, combined with modern organic farming, enterprise and skills development would attract young people to engage in the current low-productivity cocoa sector. Additionally this would alleviate rural-urban migration. Slash and burn methods practiced by older generations would cease due to intensification and productivity increases. Additional income could be generated from economic diversification into cocoa honey, eco-cocoa tourism, carbon credits and other food and cash crops, so as to ensure a sustainable global value chain for the multinational chocolate sector.
- **Assessing the national dairy value chain with a green lens in India:** Cow dung drives a shadow economy of national importance employing, most informally, half the number of workers in the dairy sector. While a buffalo can produce up to 15 litres milk daily, it also produces 30 kg of dung, equivalent to 3 litres of crude oil. Due to its high energy and nutritional value, dung is used for the production of biogas, electricity and fertilizer. The full integration of dung into a 'Dairy Dung-Energy' policy could foster socioeconomic development, providing basic energy needs and helping tackle key dairy quantity and quality bottlenecks in India, though increased income and biogas sterilization. Throughout India a total of 1.9 million additional full time jobs could be created. Though 400,000 jobs might be lost in low-productivity dung cake making, with the right just transition policies in place for those affected - mostly women workers making dung cakes -, they could be retrained and re-employed in the production of organic fertilizer from the slurry of the biogas plants.

Lessons Learned

While numerous Green Value Chain assessments and approaches have been developed, there are not yet enough completed programs that explicitly focus on 'greening the chains' to allow the drawing out of lessons learned. Regarding assessments, it has become clear that a systemic analysis is of paramount importance. This takes the assessment beyond economic factors. Indeed, environmental destruction cannot always be solved with environmental policies alone. Social policies instead, putting people's needs and their relation to the natural environment first, are often key to solving environmental challenges. It therefore very important to take into account economic, social, cultural and environmental bottlenecks in the value chain when addressing underlying root causes of inefficiencies.