Replicating Eco-Inclusive Business Models

A Contribution to Sustainable Low-Carbon Economies
Executive Summary

In the face of climate change, we urgently need to find pathways to a low-carbon economy. Only then can we improve the well-being of nine billion people by 2030 and achieve the Sustainable Development Goals (SDGs). Developing countries have to leap-frog to a low-carbon economy while continuing to improve well-being. Innovative eco-inclusive enterprises are already implementing low-carbon solutions while also providing social and economic benefits to those who need them most. While political and financial support for the transition to a low-carbon economy is growing, as demonstrated by the Paris Agreement and countries’ Nationally Determined Contributions (NDCs), implementation focuses on large projects that bring little direct benefits to low-income communities. This study shows how the replication of eco-inclusive entrepreneurial solutions tackles the double challenge of mitigating climate change and improving well-being, therefore arguing that they should be strategically incorporated in global and national plans for achieving a low-carbon economy.

Over the last 10 years, SEED has awarded more than 200 enterprises in over 40 countries for developing business models which contribute to sustainable development by solving social and environmental problems on a local level.

Many of these business models directly contribute to the reduction of greenhouse gas emissions through sustainable production or focus on climate change adaptation measures. Each of the 222 SEED Award Winners provides a real-life, inspiring example that change is possible. Winners have developed a wealth of innovations to reduce carbon emissions, ranging from waste recycling to renewable energy solutions and climate-friendly agricultural practices. SEED Winners operate in developing countries, and include low-income people in their businesses. Thus, they help countries leapfrog to new economic models, while at the same time improving well-being for a growing population.

SEED represents a vast repository of solutions that can and should be replicated. By copying and adapting a proven model, entrepreneurs can avoid failure and accelerate the switch to a low-carbon economy. But replication is often hindered by a lack of information, appropriate funding, and technical support. This paper provides recommendations to donors, funders, governments, and other support institutions on how to enable replication of proven models as a strategy for the transition to a low-carbon economy and to achieve objectives set in the NDCs.

On the following pages, you will find answers to five guiding questions:

→ Why is replication of eco-inclusive enterprises a promising pathway to achieve a low-carbon economy? p. 4

→ Which ways to replicate low-carbon business models exist and how do SEED Winners engage in replication? p. 8

→ Which barriers do those low-carbon eco-inclusive enterprises face when seeking to replicate? p. 10

→ How can different actors support replication of these types of eco-inclusive enterprises for a low-carbon economy? p. 14

→ What should be the main priorities when supporting replication for a low-carbon economy? p. 16
Replication of Eco-Inclusive Business Models Needs to be Part of the Strategy for Achieving a Low-Carbon Economy

Sustainable development, well-being, economic growth and climate responsibility are inextricably interwoven. To date, per capita incomes, as a proxy for well-being, correlate highly with carbon emissions. At the same time, those most severely affected by negative impacts of climate change and carbon emissions are the poor and vulnerable in developing countries. We have to find ways to ensure access to water, food, energy and income for 9 billion people globally, while reducing carbon emissions, and we need to implement these solutions now.

Replication of Eco-Inclusive Business Models Needs to be Part of the Strategy for Achieving a Low-Carbon Economy

Developing countries have to leap-frog to a low-carbon economy while continuing to improve well-being.

We cannot achieve the 2030 Sustainable Development Goals (SDGs) with current economic models – so much is clear. We need to not only leverage new technologies, but also innovative business models, to leap-frog carbon-intensive development pathways and move straight towards a low-carbon economy. These business models need to also include low-income people, providing them with social and economic benefits to increase their well-being.

Innovative eco-inclusive enterprises are already implementing low-carbon solutions while also providing social and economic benefits to those who need them most.

Figure 1: Comparison of key drivers for CO2 emissions in high-income and developing countries.


Figure 2: How shifting to a low-carbon economy is essential for improved well-being.

Note: CO2 Emission from energy use. Growth to 2012 or latest available year. Source: World Bank World Development Indicators
## Energy

<table>
<thead>
<tr>
<th>Country</th>
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### Eco-inclusive Business Models

- **Replication of eco-inclusive entrepreneurial solutions should be part of the global and national plans for achieving a low-carbon economy.**
- **Eco-inclusive enterprises working on low-carbon solutions are often SMMEs.** Their small scale enables them to develop business models that respond to the local social and economic needs of low-income communities. However, they have huge impact potential, and their impact could be scaled to reach the level of global impact needed to achieve sustainable development. The conventional approach to increasing their impact is by enabling growth and scale of enterprises. Yet, one organisation alone is often not capable of managing the rapid expansion required to leave a significant footprint globally. Replicating solutions that work at a local level by adapting the model to another area can offer a faster and more effective way to increase impact. Supporting replication, e.g. through funding, knowledge sharing and capacity building, is a cost-effective way to achieve emission reduction targets while improving people’s livelihoods.
- **To make NDCs ambitious enough, they need broad political support from governmental and non-governmental stakeholders.** To achieve this, climate mitigation approaches must show how they can also contribute to economic development and human well-being as envisioned by the Sustainable Development Goals (SDGs). Eco-inclusive enterprises contribute to the SDGs on a national level. Therefore, replicating these solutions should be integrated into NDCs and supported through the Green Climate Fund.

## Agriculture

- **A Global Marketing Partnership for SRI Indigenous Rice**
  - **Countries:** Cambodia, Madagascar, Indonesia, India
  - The System of Rice Intensification (SRI) combines a range of agricultural practices that increase yields significantly while saving water, seed, fertilizer and chemical crop protection. Rice is grown in irrigated conditions, which avoids excessive methane production. The methodology is already being utilised by more than 10 million smallholder farmers in over 55 countries.
  - **While political and financial support for the transition to a low-carbon economy is growing, implementation focuses on large projects that bring little direct benefits to low-income communities.**
  - **Political frameworks to support the switch to a low-carbon economy are already in place.** The adoption of the COP21 Paris Agreement in 2015 has established a legally binding agreement to collectively limit global warming to below 2°C. Countries are currently implementing their National Determined Contributions (NDCs), their strategies for climate change mitigation. As part of the Paris Agreement, developed countries commit to supporting developing countries in making the transition to low-carbon growth. The Green Climate Fund has been established with the objective to provide financial support of $100 billion yearly to aid developing countries in implementing new procedures to minimise climate change. Currently, most countries focus on large-scale projects that are simpler to implement from a funding and scale perspective than small-scale solutions. Yet, large solutions often provide little direct benefits to vulnerable communities beyond infrastructure improvements. The focus on large solutions overshadows the role of small, medium and micro enterprises (SMMEs). However, SMMEs contribute most to economic development and job creation, making them essential in the transition to a low-carbon economy.

## Waste

- **The GHG emissions from the waste management sector are around 3-5 per cent of global emissions.** Produced from mineral oils, every 10,000 standard-size disposable polystyrene foam plates result in more than 500 kg emissions of CO₂ equivalent greenhouse gases, and produce over 100 kg in non-biodegradable waste that is often not accepted in plastic recycling. However, the prevention and recovery of wastes can be ways to avoid emissions in all other sectors.

### Box 1: SEED Winners examples

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There are Many Ways to Replicate

**Closed Strategies**
- Wholly owned branches
  - The branch strategy involves setting up points of presence in a new market that are owned and operated by the parent company. With a branch strategy, the original business retains control of all (or almost all) business aspects, in the replicated entity, including business strategy, governance, systems, processes and human resources.

**Open Strategies**
- Franchising
  - Franchising involves a contractual agreement in which one party, the franchisor, licenses either its whole business concept and operational system, or its trademark (including products, name, logo) to a second party, the franchisee. The franchising agreement grants franchisees the right to use the business name and logo of the franchisor, and to sell the franchisor’s products.

- Partnership
  - Partnerships describe a broad range of relationships between a company and other actors, in which business(es) and other organisation(s) (e.g., non-governmental organisations, local businesses, and multinational corporations) agree to cooperate and pool their money, knowledge or other resources in order to advance their mutual interests. Businesses leverage partnerships to access investments and knowledge of local markets needed for replication.

- Joint venture
  - In a joint venture (JV), a separate entity is formed by two or more parties to the agreement, with each of the original parties acting as shareholders. It is designed to share risk and/or expertise, as each of the participants is responsible for the profits, losses and costs associated with it. A joint venture is the most formalised variety of a partnership.

- Open the model
  - Enterprises can disseminate their model by documenting it along with best practices and lessons learned, and making this information available to others. They can also provide hands-on learning opportunities, for example, by allowing interested organisations to visit their business sites. Some companies even develop specialised training programs for those aiming to adopt the model.

- Franchising vs Partnership

**EXPANSION**

**REPLICATION STRATEGY**

**CONTINUUM**

**DISSEMINATION AND REPRODUCTION**

**REPLICATING ECO-INCLUSIVE BUSINESS MODELS**

- **CLOSED STRATEGIES**
  - Offer greater control, but require more resources from the replicator.
  - Incentive for waste collection and processing, thereby tackling the ur-
  - *Offer greater control, but require more resources from the replicator.*
  - *Incentive for waste collection and processing, thereby tackling the urban sanitation crisis.*

- **OPEN STRATEGIES**
  - Usually chosen by highly mission-driven solutions, spread as quickly as possible.
  - *Work closely with business model innovations or technologies, but do not need expensive investments and knowledge of local markets needed for replication.*

**SEED WINNERS**

- Waste Enterprises recycles human waste into renewable fuel for industrial kilns and boilers in Kigali, Rwanda. Its target market includes all types of businesses and plastic recycling plants.
- Tambul Leaf Plates produces and markets biodegradable disposable dinnerware through various community-owned micro-enterprises. Products are made from the fallen sheath of the areca nut palm, so the product is environmentally friendly and provides a viable alternative to non-biodegradable plastic and styrofoam plates. The enterprise helps rural producers across villages in North-East India to establish micro-enterprises through capacity-building and technical, financial and marketing support.
- Sunny Money provides affordable, reliable and clean energy, particularly for lighting. The products include a solar kit to power household appliances and a solar lamp to replace kerosene lamps which are detrimental to health and the environment. In the longer term, Sunny Money aims to supply products for other uses, such as education and communication. As a distribution model, Sunny Money uses a micro-franchising system based on local entrepreneurs. It currently has a network of over 600 micro-franchises across various countries in Africa. It has also worked in partnership with microfinance institutions and NGOs, and is developing a manual to disseminate its replication methodology.
- Almado is a sustainable solid waste management system suitable for lower income urban areas. It offers training and waste management services to municipalities and civil societies. Almado has replicated the model in Niger, Mali, Togo, Congo, Cameroon, and Ivory Coast. While in some places, Almado manages the operations in partnership with local city councils, in others it has also trained other entities to set up similar models.
- Diseclar sources its raw materials from recyclers, collection points and factories. It processes the collected plastic with agro-industrial waste – such as coffee chaff, sugar-cane pulp and rice chaff – to produce ecological furniture, decks and pergolas. Diseclar’s main customers are restaurants, recreational centres and retailers. Compared to conventional wooden furniture, Diseclar offers customers long-lasting products, which can be used indoors or outdoors, withstand rain, snow, cold or heat and do not rot or splinter. Diseclar plans to form a JV in Mexico to replicate the model and set a new manufacturing unit which will use agave plant residues and plastic waste to make furniture products.

**A Global Marketing Partner-ship for SRI Indigenous Rice**
- Encourages the use of SRI (System of Rice Intensification) methods, thereby boosting rural incomes and simultaneously conserving rice biodiversity, improving the environment and significantly reducing the cost of inputs faced by small farmers. It disseminates the rice cultivation methodology with the help of Cornell University to farmer organizations around the world. It has also been structured as a partnership between local farming cooperatives and Lotus Foods, the US-based rice company which markets traditional rice varieties grown using SRI methodology.

**Box 2: Pathways to Replicate**

**CHAPTER 2: APPROACHES TO REPLICATION**

8 | 9
Barriers to Replication

Some models are more conducive to replication than others (see Box 2). Entrepreneurs seeking to replicate eco-inclusive business models face specific barriers that can impede the replication process. The barriers to replication of such eco-inclusive businesses are similar to those of low-carbon solutions (hereafter referred to as low-carbon models). Replication can be driven by the organisation that originally developed the solution (the “originator”), or by a completely separate entity (the “adopter”). Originators and adopters mention a range of barriers to finding and collecting the right kinds of information, identifying the right people as staff and partners to replicate with, and securing sufficient financing for various stages of growth. While some barriers are the same, others are specific to the perspective of the adopters (and originators).

Four features that make a business model more conducive for replication

Not all models are suitable for replication. From talking with entrepreneurs, incubators, business service providers and investors, four features stood out that make a business model particularly fit for replication: Business models that are adaptable to other contexts, relatively simple to implement, require low upfront investment and are financially viable. These factors facilitate an organic replication process where others copy and adapt the model without much extra support. In practice, business models seldom have all of these features. Therefore, it is important to provide support to enterprises to overcome barriers in accessing the right information, people and partners and financing.

Adaptable

Replicating business models into another local context is more likely to succeed when the model is easily adaptable. Models are more adaptable when they require only minor changes to fit the new target market and function in the new environment and/or when the model remains effective despite parts of it being changed.

Low upfront investment

Business models that require relatively low start-up costs are more likely to replicate. If an enterprise can quickly deliver revenues and profits, less investment is needed, which means there is less risk in starting the business, making the model more attractive for replication.

Simple

The simpler the model, the easier it is to implement. The easier it is to implement, the higher the chance of successful replication. Simpler business models require knowledge that is easy to attain and not too specialised; they rely on skills that are widespread and/or easy to transfer. Technologies used are easy to understand.

Financially viable

Models that make money attract second movers. Models that are profitable at the smallest unit of production and have little overhead costs do not have to rely on scale to become financially viable. Once a model achieves proof of concept, potential adopters and investors will find it more attractive, raising the chance that the model will be replicated.

Information

Lack of key market data

Enterprises planning to replicate low-carbon models often lack information about new target markets, including consumer habits and needs, statistics on target demographics or information on policies related to a low-carbon economy. This lack of data creates unnecessary costs and inefficiencies, as each business needs to invest in market research.

Lack of granular information on vetted business models

For potential adopters, it is hard to access information on which low-carbon models are truly viable and have impact and how they work. Some are showcased, but assessments of actual profitability and impact is often not detailed enough to know whether the model is really worth replicating.

Lack of opportunities to learn from real-world experts

Learning from entrepreneurs with working low-carbon models enables the transfer of tacit knowledge. Opportunities to learn from such experts are rare but could offer valuable insights for those replicating models.

We looked at several social enterprises and found that one of the biggest challenges for them while transferring business to a new location was access to key market information. We need to make it less resource intensive and reduce the timeframe that it takes without shifting the focus away from core activities.

Pallavi Shrivastava, IFC

There is a lack of proper documentation of systems and processes adopted by successful models. It makes it challenging for those who try to replicate the business model of the originator.

Nicolas Chevrollier, BoP Inc

Social entrepreneurs prefer to learn from their peers and concrete experience, rather than abstract trainings and publications. Unfortunately, little support exists for these kinds of exchanges so far.

Christina Tewes-Gradl, Endeva

Box 3: Four key features that make a business model more conducive for replication
Getting the right people on board

While replicating, enterprises have to find partners and staff with adequate skills and capacity and matching motivations. This is mostly done through personal networks. Although this ensures an element of trust, the drawback is that it can easily lead to suboptimal choices in the replication location.

Jamie McCloskey, Sunny Money

Low supply of appropriate know-how

The combination of solid business skills and a deep understanding of the low-income markets is rare. Yet, successful replication of social and environmental businesses relies on a team and partners that understand both business and social/environmental goals. Low-carbon models may also require expertise in climate change mitigation and adaptation strategies. For businesses wishing to copy a model, it is hard to gain access to people that have tacit knowledge of the originating business.

Rainer Agster, SEED

Our model relies on micro-franchisees in order to create effective distribution networks. Retaining them sometimes is a challenge since they are not our employees. It’s important to have a good interface with them and develop their skills as entrepreneurs and partners.

Funding bias towards new ideas

There is a growing number of grants and start-up funding available for innovations, but a lack of financial support for second movers that are replicating innovative models. This is particularly true for climate change mitigation and adaptation grants.

Stevie Valdez, Global Alliance for Clean Cookstoves

Even a modest amount of financing can go a long way for a start-up marketing initiative. However, both conventional and socially responsible loans involve bureaucratic hurdles and high interest rates, and require a previous track record of success.

Olivia Vent, SRI Partnership

Most of the funds are chasing game-changing innovations. There are no funds to specifically support replication.

Lack of financing focused on the active dissemination of business models

Documenting and disseminating a business model to make it easy to adopt is time-consuming and does not contribute to the core business. Businesses seeking to maximise their social and environmental impact can be discouraged by these costs that are currently not compensated.

Olivier Kayser, Hystra

Donors could organise sectoral workshops in countries where they have a local presence. They would gather all the necessary players of the chosen sector in one room, and expose them to selected best practices in the field.

Lack of suitable working and expansion capital

Many social and environmental businesses struggle to access appropriate financial products. Working capital is typically available, though unaffordable, while the capital needed to expand often falls in “the missing middle” - too high for micro-finance and too low for commercial banks and traditional investors, or it is too expensive.

Oliver Agster, SEED

We have worked with more than 200 small and growing eco-inclusive enterprises in the past 10 years and during that time learned that there are many business models out there that proved to work well and are easy to adapt to a different context. We need to showcase successful models while improving business skills of future entrepreneurs.

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**Solutions for Accelerating Replication**

When business models lack one or more of the features that make a model more conducive to replication (see Box 3), it is less likely that entrepreneurs will replicate their model without support to overcome the barriers they face. Different actors in the business ecosystem can accelerate the replication of eco-inclusive businesses contributing to a low-carbon economy by providing solutions to these barriers. The following pages show which actors can do what to ensure that the potential of replicating these businesses is recognised and realised. Because these barriers are similar to those of other eco-inclusive enterprises, policy makers can build on good practice examples from other sectors.

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|                              | → Improve local banking support for low-carbon models | → Improve local banking support for low-carbon models | → Improve local banking support for low-carbon models |

| Civil society organisations  | → Build talent for eco-inclusive enterprises working on low-carbon models | → Build talent for eco-inclusive enterprises working on low-carbon models | → Build talent for eco-inclusive enterprises working on low-carbon models |
|                              | → Raise awareness among other stakeholders of the importance of supporting the role of eco-inclusive enterprises in the transition to a low-carbon economy | → Raise awareness among other stakeholders of the importance of supporting the role of eco-inclusive enterprises in the transition to a low-carbon economy | → Raise awareness among other stakeholders of the importance of supporting the role of eco-inclusive enterprises in the transition to a low-carbon economy |

| Companies                    | → Successful (replicated) eco-inclusive enterprises can share knowledge about functioning low-carbon models and replication experiences | → Successful (replicated) eco-inclusive enterprises can share knowledge about functioning low-carbon models and replication experiences | → Successful (replicated) eco-inclusive enterprises can share knowledge about functioning low-carbon models and replication experiences |
|                              | → Local market-research companies can produce data such as consumer demographics and key legal parameters affecting replication of low-carbon models | → Local market-research companies can produce data such as consumer demographics and key legal parameters affecting replication of low-carbon models | → Local market-research companies can produce data such as consumer demographics and key legal parameters affecting replication of low-carbon models |

| Investors, including impact investors | → Share information on successful and unsuccessful low-carbon models, thus creating a culture of open dialogue and learning that supports replication | → Share information on successful and unsuccessful low-carbon models, thus creating a culture of open dialogue and learning that supports replication | → Share information on successful and unsuccessful low-carbon models, thus creating a culture of open dialogue and learning that supports replication |

| Incubators, accelerators and hubs | → Help disseminate granular information on successful low-carbon models | → Help disseminate granular information on successful low-carbon models | → Help disseminate granular information on successful low-carbon models |

| Research institutions          | → Conduct research on low-carbon models | → Conduct research on the role of eco-inclusive enterprises in climate mitigation | → Conduct research on low-carbon models and their role in climate mitigation |

|                               | → Support the dissemination of information about eco-inclusive enterprises | → Support the dissemination of information about eco-inclusive enterprises | → Support the dissemination of information about eco-inclusive enterprises and their role in climate mitigation |

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**CHAPTER 4: SOLUTIONS**

**REPLICATING ECO-INCLUSIVE BUSINESS MODELS**

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**Taking Action**

The shift to a low-carbon economy is the most fundamental challenge of this century. If we attain it, we will improve the well-being of nine billion people and support the achievement of the Sustainable Development Goals by 2030 and the Paris Agreement. Debates around climate mitigation are biased towards large projects. Yet, SMMEs contribute most to economic development and job creation, making them essential in the transition to a low-carbon economy. Eco-inclusive enterprises are already providing innovative low-carbon solutions while serving local populations who are too often forgotten. Replicating these low-carbon solutions accelerates the transition to a low-carbon economy while improving well-being. All societal actors are called upon to support eco-inclusive enterprises in replicating proven low-carbon models. Three steps are vital for the transition:

1. **Take small-scale solutions into account in programs and policies for low-carbon development**

   Many countries are already developing implementation strategies in their NDCs for their shift to a low-carbon economy. Including small-scale solutions will provide more comprehensive and effective policies, while at the same time supporting SMME growth and job creation.

2. **Identify the most impactful solutions and showcase them**

   Eco-inclusive enterprises have already taken the lead in their sectors in developing low-carbon products that improve the lives of the poor. Vetting and closely documenting these solutions and spreading knowledge and awareness of these models can inspire action from various stakeholders.

3. **Actively support dissemination through dedicated funding, information, and capacity building**

   Everybody can take action, doing what they do best to support the dissemination of low-carbon business models. For example, funding is needed on various fronts including for brokering services between investors and entrepreneurs; this provides slow capital or financing in-depth case studies that reveal granular information.

**A new programmatic effort – the SEED Replicator**

To promote increased replication of high potential eco-inclusive business models in developing countries and emerging economies, SEED has launched a new programmatic effort in 2016 – the SEED Replicator. Within this programme SEED conducts research on the performance of various high impact eco-inclusive enterprises to identify the most promising business models and their experiences, challenges and success factors. The programme initially focuses on five sectors: Sustainable Agriculture, Manufacturing, Energy, Integrated Waste Management and Tourism. Learnings from the conducted research are distilled into business model specific Replicator Workbooks that are made available to aspiring entrepreneurs in Replicator Connect Workshops. At those workshops, selected applicants will receive hands-on support to take their first steps towards building their own eco-inclusive enterprise based upon the original business idea. Special focus is given to create local ownership and ensure anchoring the new enterprise in the local context.

The SEED Replicator is built upon SEED’s understanding that local ownership and multi-stakeholder partnerships in combination with non-financial tailored business development support (BDS) are the ingredients for ensuring successful replication of eco-inclusive businesses models. To this end, SEED’s toolkit-based BDS concept and the upskilling of local BDS providers strive to provide an enabling environment for the uptake and scale-up of replication-prone eco-inclusive business models. The SEED Replicator Programme is made possible in South Africa through the generous support of the Government of Flanders. Through a partnership with the SWITCH-Africa Green Project, which is implemented by UNEP with the assistance of the European Union, SEED will also implement the programme in Burkina Faso, Ghana, Kenya, Mauritius, South Africa and Uganda.

Find out more about the SEED Replicator via [www.seed.uno/support/replicator.html](http://www.seed.uno/support/replicator.html).
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ABOUT SEED

SEED is a global partnership for action on sustainable development and the green economy. Founded by the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP) and International Union for Conservation of Nature (IUCN) at the 2002 World Summit on Sustainable Development in Johannesburg, SEED supports innovative locally driven enterprises around the globe which integrate social and environmental benefits into their business model. It is hosted by adelphi research gGmbH, based in Berlin, Germany, adelphi research is a leading think tank for policy analysis and strategy consulting. The institution offers creative solutions and services regarding global environment and development challenges for policy, business, and civil society communities.

ABOUT ENDEVA

Endeva’s mission is to inspire and support enterprise solutions to the world’s most pressing problems: making poverty a thing of the past and preserving ecosystems for the future. In our projects, we build, share, and apply knowledge to develop, implement and grow inclusive business models. As an independent institute, we work closely with partners from all sectors. The people at Endeva share a passion for positive change and inspiring collaboration.

ENDNOTES


2 Carbon intensity of energy is the carbon emissions per unit of energy.


6 SEED. 2015: Turning Ideas into Impact: Setting the Stage for the next 10 Years of Green and Inclusive Growth through Entrepreneurship.


17 Bowen, Alex and Frankhauske, Sam. 2015: Low carbon development for at least developed countries. Retrieved 04.07.2016, from http://www.wto.org/English/tratop_e/ gatt_e/pm_pm_e.htm.


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