

Annual Reflection 2016



Contents

MESOPARTNER PROFILE 4

FOREWORD: GREEN ECONOMIC DEVELOPMENT 6

01 WHAT EXACTLY IS GREEN ECONOMIC DEVELOPMENT? 11

02 COMPETING PRIORITIES: TRADE-OFFS BETWEEN "GREEN" AND OTHER TOPICS 15

03 GREEN ECONOMIC DEVELOPMENT AS AN EVOLUTIONARY PROCESS 19

04 SHAPING A CLIMATE SMART AND ECO-FRIENDLY BUSINESS ENVIRONMENT 25

05	BOTTOM-UP INDUSTRIAL POLICY AT TERRITORIAL LEVEL	31
----	--------------------------------------------------	----

09	INNOVATION REQUIREMENTS OF A CLIMATE-SMART LOCATION	49
----	-----------------------------------------------------	----

06	THE META LEVEL OF GREENING TERRITORIAL ECONOMIES IN TIMES OF CLIMATE CHANGE	35
----	-----------------------------------------------------------------------------	----

10	ECO-SYSTEM SERVICES AND TERRITORIAL COMPETITIVENESS	55
----	-----------------------------------------------------	----

07	CAN STANDARDS HELP DEVELOPING COUNTRIES PHASE INTO A GREEN ECONOMY	39
----	--------------------------------------------------------------------	----

11	FROM VALUE CHAINS TO CIRCULAR ECONOMIC SYSTEMS	59
----	------------------------------------------------	----

08	DRIVING FORCES FOR GREENING URBAN AND RURAL LOCATIONS IN THE EU	45
----	-----------------------------------------------------------------	----

MESOPARTNER'S STRATEGIC CLIENTS 2015/2016	62
COUNTRIES IN WHICH MESOPARTNER IS CURRENTLY ACTIVE (2015/2016)	63
THE PARTNERS	64
MESOPARTNER ADMINISTRATION	71
MESOPARTNER ASSOCIATES IN 2016	72
MESOPARTNER PUBLICATIONS IN 2015/2016	74

MESOPARTNER PROFILE

Mesopartner is a knowledge firm that specialises in economic development, competitiveness and innovation. Our strategic intent is to be globally acknowledged as an innovator in economic development. We partner with strategic customers and associates through capacity building and coaching, as well as programme design, method and tool development and capture, knowledge management and problem solving.

We operate as adviser and service provider to development organisations (development agencies, ODA (Official Development Assistance) donors, development banks, NGOs, cluster networks and others), to decision makers in private



and public sector and to consultants and consulting firms. Since 2003, the knowledge that we have shared, and the tools that we have developed, have helped development organisations and stakeholders in many developing and transformation countries to conduct territorial and sectoral development in a more effective and efficient way.

Mesopartner offers the knowledge that local actors need to address the challenge of innovation and change in a systemic and complexity-sensitive way. We develop innovative tools based on local and regional economic development, cluster and value chain promotion, market systems development, strengthening of local innovation systems and related topics. We coach and equip practitioners, and conduct leading-edge learning events for practitioners.





Foreword

Green Economic Development

The purpose of our Annual Reflection series is to illustrate how we are currently approaching our work from a specific perspective. During the past two years, our Annual Reflections have focused on specific themes. In 2014 we discussed *complexity in economic development*, and in 2015 we examined *territorial economic development*. This year we have dedicated our annual flagship publication to a topic that is high on the development agenda and which will increasingly gain more relevance and importance, namely *green economic development*.

During the industrialisation of what are now developed countries, there has been a close correlation between economic growth and environmental degradation. As communities grow, the environment seems to suffer and decline. This trend is clearly demonstrated by graphs that correlate human population numbers, economic growth and environmental indicators. Resources such as water and air, and biodiversity, which are taken for granted, are in fact limited. The world is being increasingly faced with water scarcity, severe air pollution, resource depletion and



all the negative impacts of climate change, such as extreme weather events and failing crops. The negative impact of human progress on the environment is frequently discussed by scientists, politicians and the media. However, what is very often not discussed is how to assist developing countries to take a growth path with less of a negative impact, or how to help territories in developing countries to cope with the changes.

This is a big challenge for national and subnational economies in developed and even more so in developing countries and for the enterprises operating there. How do we respond to these challenges? How do we become resilient and protect against negative impacts? How do we take advantage of new opportunities that may emerge? There

are many competing hypotheses about what should be done, and many unanswered questions on how developing countries will be affected by global changes. This makes the whole situation very complex indeed.

In order to de-clutter the complex topic of green economic development, in the eleven articles in this publication we have tried to look at it from different angles and in a holistic way. In this regard we have benefited from the fact that all six partners who have co-authored this publication have had the chance to work with their clients in different parts of the world on specific aspects of green economic development in recent years. Among others this work includes

- The elaboration of the concepts of green local economic



development (LED) and climate-smart locations in the Philippines

- The facilitation of the strategy development for the Business Innovation Hub and Science Park in Botswana, with the emphasis on development that will enhance the environment
- Working with the Skills for Green Jobs project in South Africa which focuses on technological capability building in green technology development and adaptation
- Helping partners in Costa Rica to develop an explicitly green concept of LED
- The organisation of green study tours in Germany for participants from developing countries
- The ongoing research by several partners on complexity and how it relates to green economic development.

In the first article of this Annual Reflection we define what we understand by green economic development. This is followed in the next article by a discussion of the trade-offs between green and other relevant development topics in the light of our understanding that economies are complex evolutionary systems. Article 3 debates how such an evolutionary process in a given country or territory can be influenced and how the system's evolutionary path can be changed to become more environmentally conscious. Article 4 describes the ideal nature of the business environment and the archetypes of instruments potentially available to direct economic actors in an ecologically sensitive direction. Article 5 looks at (green) industrial policy from the bottom up: how to introduce a green economy (or elements thereof) from the bottom up, how to work from where you are, harness the energy and momentum, and lay the foundations. This

requires responsive and forward-looking meso institutions. However, the meta level is equally important for a green transformation process, as it requires a shift in the mindset of people in very different societies around the globe (see Article 6).

Article 7 looks at different pathways for countries to phase in green technologies with a specific emphasis on the role of voluntary standards designed and agreed upon by businesses. Article 8 discusses the empirical experience during green innovation study tours of possible driving forces for greening urban and rural locations in the European Union. Learning and innovation requirements are analysed in Article 9. Enhancing territorial competitiveness is the focus of Article 10, which considers ways to assign costs to the use of eco-system services in order to ultimately maintain healthy ecosystems. Article 11 concludes the discussion of green economic development by addressing one of the most advanced concepts of eco-efficiency: circular economic systems.

Although this publication has tried to look at green economic development in a holistic way, we are aware that it has not dealt with the topic in all its richness and diversity. However, this is neither possible nor necessary within the frame of our Annual Reflection: it is rather our intention to stress the importance of the topic for our work and for the mandate of our clients and to map out what we have learned in recent years with regard to relevant questions and possible answers for sustainable economies.

Christian Schoen
cs@mesopartner.com





01

What exactly is green economic development?

Christian Schoen and Frank Wältring

In the context of this publication, our understanding of green economic development is that it is a means of maintaining competitiveness or even striving for increased competitiveness by selected sectors or the whole economy at national or sub-national level in times of climate change and environmental degradation. This is achieved through seeking resilience of enterprises and the business networks and market relations they are embedded in, looking for related business opportunities and identifying resource-efficient behaviour and cost-saving potentials. In a green economy resource efficiency and green procurement procedures are equally important in the public sector.

“Greening” in the context of specific economic development approaches such as territorial economic development, value chain development or business development services means to improve enterprise performance and competitiveness, while preventing environmental degradation, climate change, biodiversity loss and unsustainable use of natural resources. Framework conditions for enterprise operation and specific meso-level institutions that help enterprises to enter a

sustainable development path require being climate smart and environmentally sound (see articles *Shaping a climate-smart and eco-friendly business environment and Innovation requirements of a climate-smart location*).

In the 2010 Annual Reflection we published an article on green growth and sustainable development for the first time. At that time, we tried to de-clutter the “green” topic and introduce some structure into the discussion about the “Green Buzzword Puzzle” (see Annual Reflection 2010). The article tried to structure climate change opportunities for private sector development into four different categories: resource and energy efficiency, renewable energy, technology development and employment promotion/capacity building. This structuring effort was a useful first attempt to stimulate discussions within the firm and during our training events, such as the Summer Academy. But we soon understood that restructuring would be necessary if we were to become more consistent at distinguishing between means and ends. The four dimensions focused more on climate change responses related to mitigation, and they largely ignored climate change adaptation challenges and opportunities. Technology development and capacity development are

crosscutting issues, whereas employment promotion is an accompanying effort. Taking these considerations into account, we reshaped the logic of tackling climate change into a triangle as shown in Figure 1.

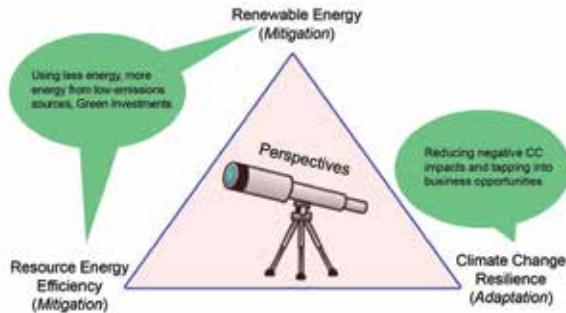


Figure 1: Generic perspectives on tackling climate change
 Source: Schoen, C. (2014)

Figure 1 introduces a generic perspective that tries to structure the interplay between enterprises and climate change in a simple, yet consistent way. The triangle shows possible focal areas and synergies of interventions to promote green economic development.

Economic development essentially targets enterprises (using a wide definition of the term “enterprise”) and is based on a set of universal key principles, such as participation, ownership, trust and collaboration, subsidiarity, market and demand orientation and remedying market failure. Green economic development aims at the same target group and draws on the same principles, but it extends the spectrum of values and principles. Additional guiding principles are resource efficiency, climate smartness, resilience and cradle-to-cradle life cycle (see article *From value chains to circular economic systems*). When it comes to climate change, enterprises are addressed in their different roles as perpetrators, benefactors, victims and entrepreneurs seeking new opportunities.



At the enterprise level, particularly in developed countries, there is an increasing understanding that addressing environmental and climate change concerns is not merely an annoyance and a disturbance of the business operation, but that it is unavoidable and crucial for continuing to run a business and make a profit. Even more than that, it generates a huge range of business opportunities and cost-saving potential. To be willing to accept this enterprise challenge, a shift in the core value system of enterprises is necessary. This mental change is perceived as a shift from *shareholder value* to *sustainable value* (Senge et al., 2008). A successful future enterprise must respond to external environmental, societal, technological and political drivers in such a way that it generates benefits for itself and its ability to compete. It must be able to anticipate future trends and prepare itself with today’s decisions for tomorrow’s innovations, products and customers. Only then can a sustainable enterprise value be created that not only considers shareholder profits, but also and increasingly societal and environmental values. In the end, adopting the *sustainable value* mindset will be good business and a competitive advantage for prime movers.

Many developing countries and their medium-to-large enterprises have an intrinsic motivation to go for green transformation as they increasingly witness their vulnerability to climate change, such as the Philippines, the Maldives and Vietnam in Asia, or they see the future of their eco-tourism business in danger, such as Costa Rica in Central America. Other countries in the developing world, e.g. Sub-Saharan Africa, are not yet feeling the effects of climate stress, and are more concerned about other problems, such as inward migration, de-industrialisation, youth unemployment or inequality (see article *Competing priorities: trade-offs between "green" and other topics*). Those countries have different perceptions of what problems are most severe and hence what their priorities are for the time being, and therefore their orientation of economic development and the solutions selected are also different.

According to our expectations, however, climate change and environmental degradation will move to become the top-rated problems essentially everywhere in the medium-term. As a consequence, situation-specific solutions to this problem as part of the economic development agenda will evolve globally in a demand and priority-driven, bottom-up manner (and probably later taken up by top-down policies) (see article *Bottom-up industrial policy at territorial level*). Green economic development should not be considered as a proposed solution, but rather as something that presents a wide spectrum of possible responses to a rapidly declining environment and overexploited natural resources that ultimately need to be addressed everywhere.

References:

Schoen, C. (2014). Green LRED Concept Note, 2nd Draft April 2014. ProGED Project, Philippines.

Senge, P., Smith, B., Kruschwitz, N., Laur, J. & Schley, S. (2008). *The necessary revolution: how individuals and organizations are working together to create a sustainable world*, 1st edition, April 2010.





02

Competing priorities: trade-offs between “green” and other topics

Marcus Jenal and Dr Shawn Cunningham

Different development programmes have different priorities and goals. Some promote economic development, competitiveness and growth. Some promote green economic development. Some focus on poverty reduction and the inclusiveness of growth. Again others’ objectives are to promote women economic empowerment. Yet others look at how to reduce vulnerability and increase the resilience of the economy or that of individual households to disasters and climate change. And finally, there are some that somehow try to include many or all of these objectives at the same time. The Sustainable Development Goals (SDG) define a host of development priorities, and it is challenging to include all of these into a single development effort. With our understanding of the economy as a complex evolutionary system that is embedded in the culture and history of a context (see *Green Economic Development as an evolutionary process*), we can begin to understand that it is extremely demanding to include all these different aims in our development efforts. Even before we consider complexity, we can easily see that there

might be trade-offs, especially given the generally short time horizon of development programmes. Is there a trade-off between growth and inclusiveness? Or between growth and women economic empowerment, at least in the short run or over a project’s lifetime? Is there a sequence that we should prefer, e.g. growth over inclusiveness or women economic empowerment over green? What is more important, green development and sustainability or inclusiveness? Do they easily go together? These are all important questions without clear answers. But designing development programmes to promote even one of the aims such as green economic development is challenging. The more dimensions we add to our objective, the more demanding the endeavour will be – unless we find clear synergies between some of these aims.

We recognise that we do not have the answers to all the above questions. However, there are a number of points we can make based on our understanding of the economy and how change happens in society and the economy.



- Systems are open and interconnected. Markets are embedded in society. The culture and institutions of a society strongly influence how their market actors behave and which technologies and business plans will be successful in that market. We can say that the socio-economic system has certain dispositions. We need to try to understand these dispositions within a society in order to design our interventions. In some societies, strengthening the position of women in the economy might be more widely acceptable than in others. The population of one region might be more open to business ideas that reduce the impact of the economy on the local and global environment than others. Understanding these dispositions allows us to start with aspects of development that give us a higher chance to get traction, and we can then add in other objectives later on.
- At the same time, we cannot look at different improvements in an overly reductionist way and try to achieve them in isolation from each other. We cannot first get the economy growing and then look at aspects such as green or inclusiveness. Neither can we first find a better way to include the poor in the market and then strengthen the competitiveness of that market. The one depends on and influences the options we have for the other. Complex systems are path dependent and what we do first influences our options of what we can do later. We need to be vigilant and keep our ears and eyes open to understand how our intervention in one area, e.g. green development, influences another, such as overall competitiveness. We need to make sure that changes are consistent with our aims and values and that our interventions do not lead to unintended negative consequences for some.

- Societies and markets are not homogenous. There is always the potential to find pockets within a given market or region where some things work better than in other areas. For example, there might be companies in a territory that realised the potential of increasing women's access to decision-making positions, which could even have happened without anybody making a conscious decision to do so. There might be other companies who understand that using green technologies can boost their overall competitiveness, for example through reducing energy consumption and wastage. If we find these pioneers, we can understand how they overcome the boundaries that other actors struggle with and amplify this type of behaviour. It is important not just to look at the average company but also at the outliers. An example of such pioneers are firms who adopt green technologies because they recognise that these technologies give them a competitive advantage by reducing cost and/or wastage.

There is no easy solution to the question addressed in this article. However, by improving our understanding of how change in markets and economies happens, we can become better at designing interventions that lead to positive change in line with our development objectives (see *Green economic development as an evolutionary process*).





03

Green Economic Development as an evolutionary process

Dr Shawn Cunningham and Marcus Jenal

To understand how to influence economic development in a territory to make it “greener”, one needs to appreciate how change happens in the economy in general. At Mesopartner, we understand the economy as a complex adaptive system (see Annual Reflection 2014) and we study the way change happens in such systems. Based on scholarly literature and through practical insight we have gained through our work, we subscribe to the view that the economy is an evolutionary system that is far from being in equilibrium. We do not believe in the traditional economic view that the economy is a system that tends towards an imaginary equilibrium of supply and demand.

This means that our approach to economic development in general and to green economic development in particular needs to be informed by how we can influence this evolutionary process in a given country or territory and change the system’s evolutionary path.

Evolution is a very powerful, generally usable and

naturally pervasive mechanism for finding solutions to complex problems¹. Evolution finds, from a diverse range of possibilities, the designs that are most appropriate for achieving a particular purpose. In biological terms, the purpose is reproduction and fitness. In the economy, the purpose is to cater to human needs and preferences and create wealth.

Three interdependent evolutions

The mechanism of evolution to achieve this is to increase variety and select appropriate and fit designs, and to amplify them. In the economy, evolution occurs in three interdependent domains²:

- **Physical technologies** are methods and processes for transforming matter, energy and information from one state into another in pursuit of a goal or goals; they enable people to create products and services that are worth trading.

¹ An extensive description of why the economy is an evolving, complex system, what this means for economic theory, and why evolution is the main force for wealth creation in the economy can be found in Beinhocker (2006).

² See Beinhocker (2006: 15)



- **Social technologies** are methods and designs for organising people in pursuit of a goal or goals; they smooth the way for cooperation and trading these products and services.
- **Economic technologies** are business plans made by enterprises and other organisations that are competing with each other for resources and buy-in in the economy. These business plans typically combine physical technologies with social technologies.

One simple rule of evolutionary theory is that evolution is more effective than designers in finding solutions to complex problems. To intentionally design solutions for complex problems and select the most desirable combination of options will most likely not lead to the optimal outcome. The chances are fairly small that one or a few individuals will find the ultimate design solution to the given problem that can bring about transformational change in the performance of a regional economy. The more promising strategy is to tap into the evolutionary process itself, and to accept the reality that we do not know before the time which ideas will work and why. The economy itself is a mechanism in which a variety of different solutions are created, selected and amplified, and where the efforts of many solution developers are tested, chosen and refined.

To tap into this evolutionary process in the economy, we have two complementary starting points. Firstly, we can directly or indirectly increase the number and variety of things that are tried. Secondly, we can try to get an understanding of and influence which options are selected and amplified and why.

Increasing the number and variety of things tried

To increase the number of things tried, we as development agents can introduce options into the system ourselves.

This approach is often chosen for technical cooperation projects that promote the uptake of a particular technology such as solar power or biogas in a given region. The advantage of this is that we can select which options are more in line with our development goals and values, for instance, to promote green local manufacturing. It requires us, however, to bear in mind that our designs may not really provide a diverse enough variety, and may reduce the chance of one of the designs being successfully selected to be introduced into the system and amplified. Furthermore, introducing sophisticated solutions into a context might displace local learning and innovation, even if it is at a much lower level of sophistication.

Alternatively, we can stimulate existing enterprises to try new things or new combinations, i.e. to innovate. This will require that the risks for innovators of trying novel ideas be greatly reduced. We can also encourage and support new entrants to enter the market and try new combinations of physical and social technologies in new business models. In this approach, we do not have control over all the experiments that are done, but we can be sure that the things that are tried are much more in line with the local

realities and the context. They therefore have a greater chance of succeeding. In addition, as development agents we have limited resources, which allows us to try only so many things. If we manage to get many different firms to do the same and try new things simultaneously, we achieve a much greater breadth in what is tried – and correspondingly a greater chance that something will be found that works.

The central key to fostering the development of better technologies and business plans is to recognise the importance of knowledge. Knowledge is important because it makes development of and experimentation with new ideas easier and more effective. While knowledge is being developed in developing countries, the pace of knowledge accumulation and development is much slower than it is in industrialised countries, where knowledge development through scientific exploration and practical experimentation is much faster. In practice, we can for example work with local research, technology or education institutions to try and stimulate more research to capture and articulate local requirements and specifications as a means of highlighting local demand.





Or we can support experimentation with technology by supporting a laboratory where enterprises can try to combine new technologies with their current technologies, thereby reducing their risks of trying new ideas.

Influencing what is selected and amplified

We can influence what is selected and amplified among all the things that are tried, for example green technologies and business models. This requires us to intervene in industrial policy and the business environment (see article *Shaping a climate smart and eco-friendly business environment*). In evolutionary terms, we are trying to influence the fitness function of physical technologies, social technologies and business plans in a given region. This can be done in different ways, as outlined in other articles in this publication. Importantly, though, selected interventions should not specify exactly which technologies or business plans will be successful, so enough room must be left for variety and experimentation. Promotion of specific solutions may hamper the ability of the economy to creatively develop novel ideas in the future.

Markets are deeply embedded in society. Societal beliefs, attitudes, norms, rules, etc. – i.e. a society's culture – as well as the region's history, shape the fitness function of what is successful in markets. They influence both preferences of the consumers as well as what is being tried by companies or allowed through regulations. They shape things such as risk-taking behaviour, relationships between companies, the state and companies, companies and customers, etc.

Market systems are an expression of the underlying societal system and they are highly complex. They are also highly unpredictable. As a consequence, what influence leads to which result cannot be said with



certainty. Interventions to shape the fitness function of a region can lead to contrary and unexpected outcomes. For example, influencing a fitness function in a region to strengthen the competitiveness of alternative energy production, e.g. through subsidies, can lead to the use of technologies that are not appropriate for the context, e.g. solar power in regions where wind would be more appropriate. Approaches to market and green development need to be complexity sensitive as has been described in previous editions of the Annual Reflections. Essentially, practitioners need to build their interventions on a portfolio of safe-to-fail experiments rather than to define one particular path in advance and then keep following it blindly. The experiments need to be closely monitored to capture early signs of success or failure, including unexpected effects.

With such an approach we can also make sure that technologies are not only chosen because of their greenness, but also because they are otherwise appropriate in the given context. For example, they could be chosen because they reduce wastage, energy consumption, or otherwise positively influence the competitiveness of a given business plan or plans. Such positive side effects are difficult to see when solutions are designed, but they are easily found by

allowing self-selection of solutions. To foster a green transformation, an indirect approach might be more effective.

Key questions to ask here are how we can influence the fitness function so that greener technologies and business plans become more competitive. How can we make these technologies more acceptable, affordable or attractive?

Another important question to ask is how we can ensure that this interference does not negatively affect the competitiveness of the region overall or compromise other targets, e.g. the inclusiveness of the economy. This question is addressed in the article *Competing priorities: trade-offs between “green” and other topics* in this Annual Reflection.

Reference

Beinhocker, E. D. (2006). *The origin of wealth: evolution, complexity, and the radical remaking of economics*. Harvard Business School Press: Boston, Mass.



04

Shaping a climate-smart and eco-friendly business environment

Christian Schoen and Marcus Jenal

Adjusting the business environment of a country or territory to the new realities of climate change and environmental degradation is a complex and long-term process. This cannot be done on a project basis, but needs to be a permanent process led by national and regional actors. It also requires a solid understanding of how economies evolve and change (see article *Green Economic Development as an evolutionary process*).

The shape of the business environment strongly influences the behaviour of businesses in a way that could be considered climate smart and eco-friendly. The enabling environment for businesses is shaped by government-created factors that range from generic and sector-specific laws and regulations to service delivery, including development services. However, the business environment is not only formed by a government's economic development and industrial policy, but also by initiatives from the private sector to interact and innovate in order to strengthen the competitiveness of a given economic sector or the business community in a locality in general.

The behaviour of economic actors can be influenced in

three different ways: through pulling, pushing or enabling. Together, pull, push and enable instruments shape the evolutionary landscape for business to experiment with different product, process and business model innovations or even to switch to a more circular model of resource use (see article *From value chains to circular economic systems*).



Figure 2: Shaping a green business environment: pull, push and enable

Source: adapted from Schoen , C. 2014



To “enable” enterprises to become more eco-friendly, typical tools are applied to address knowledge, skills and relevant transformation processes concerning green technologies. These could, for instance, include information campaigns on cost-advantages and opportunities to turn enterprises into green, eco-efficient businesses, or awareness creation of climate risks upstream and downstream of value chains. However, the support of eco-labels and voluntary industry standards for environmentally friendly products (see article *Can standards help developing countries phase into a green economy?*), or setting up and maintaining a database of eco-friendly technologies, are also part of this family of enabling instruments.

“Pull” instruments target the sensitivity of businesses to prices and costs and hence influence the economic and financial decisions of firms. Financial incentives and disincentives are created to pull businesses in a

certain direction. This is often done by internalising the non-market, social costs of environmentally unfriendly behaviour, e.g. burning fossil fuels, or by making eco-friendly choices cheaper, e.g. by subsidising particular green technologies, or more lucrative, e.g. by feed-in tariffs for privately generated green energy. Market-based instruments, such as systems of carbon trading in combination with a quota approach that sets a cap on permitted emissions, are an attempt to influence enterprise behaviour in both developed countries (raising the costs of carbon emission) and in developing countries (lowering the costs of implementing green technologies). On the demand side, the public sector can make a deliberate choice only to buy products and services that are eco-friendly and climate smart in production and/or usage, thus favouring green enterprises over others through green procurement procedures.

“Push” instruments do not provide choices, but clearly tell enterprises and other economic actors what to do and what to avoid. Launching and enforcing environmental regulations or introducing green governance within the steering structures of the economy define boundaries for economic activities and their results.

The article *Driving forces for greening urban and rural locations in the EU* in this Annual Reflection gives examples of knowledge and skills (enable), policy and regulations (push) and finance and economics (pull) factors that define the EU’s efforts for a green transformation.

However, it is far from easy to establish these instruments. In the case of both pull and push instruments, there is a considerable risk that they may create unintended consequences. Incentives such as subsidies for a particular green technology can lead to sub-optimal choices of technologies. For example, if solar panels are subsidised, this can lead to a



situation where it makes financial sense to install them in environments where other forms of green energy generation, e.g. wind, would be more favourable and in the long run cheaper for that particular society overall. Stringent boundaries such as environmental regulations can lead to political backlashes if they endanger traditional industries with strong lobbies or lead to structural changes with temporarily high levels of unemployment.

Cap-and-trade systems such as the European Union Emissions Trading System (EU ETS) have huge implementation problems. Moreover, intervention in market prices can lead to rent-seeking by enterprises, industries and even countries. In order to avoid such unintended effects, policies should be tested on a small scale before scaling them up in whole regions or countries. Private initiatives to introduce climate-friendly business models only work when the market





environment is conducive to them and when there is enough coordination and trust between businesses in an industry or territory.

Ideally, interventions should not specify exactly what technologies or business plans should be adopted. They should leave enough room for variety and experimentation to find novel and innovative ways to face the challenge of a green economic transformation. For example, a business should not promote wind or biogas as specific technologies to reduce the carbon footprint of a region. It should allow the local actors to try different things and select what works for them in their context. In an effective business environment, the “push” element in particular can ensure that the selected technology effectively reduces the carbon footprint of the region by setting clear boundaries. The economy will select the technology or business model that solves the problem most efficiently in given circumstances.

A well-balanced combination of all three types of instrument is needed to move in the desired direction. There is strong evidence-based support for the use of a mixture or “bundle” of instruments to encourage green behaviour in companies, governments and households. At the same time, there need to be instruments to discourage and move businesses away from less sustainable behaviours, for example the use of fossil fuels. In order to make such bundles of instruments effective, there must be awareness of how instruments and the responses they trigger interact, as there may be conflicting responses and possible systemic rebound effects. These bundles need to be created for each specific context and cannot be copied to other contexts as the context and its history strongly determine how





businesses react to different incentives. Small-scale, safe-to-fail experiments might be useful for testing the feasibility of a combination of instruments and detecting unintended consequences early on.

In an ideal situation, getting the business environment right is a process of continuous exploration and experimentation, and this takes time. Currently there is an academic and political discussion taking place on whether there is still time for exploration. 80% of the CO₂ is already being emitted that would allow global warming to be kept below 2°C. Following this argument, the carbon concentration has to be reduced immediately and radically to prevent ecological damage from being magnified and the costs of adaptation from exploding. This in turn would mean that there is scarcely time for testing and exploring mitigation technologies and renewable energy solutions at the territorial level. Instead, green industrial policy would need to select suitable technology families (see Altenburg et al. 2015) and use a bundle of smart interventions to (temporarily) push, pull and enable their diffusion.

In conclusion, shaping a climate-smart and eco-friendly business environment is an extraordinary challenge for both politicians and industry leaders, as it takes place in a field of political and industrial tensions and interests against a backdrop of scientific debates.

References

Altenburg, T., Lütkenhorst, W. (2015). Industrial Policy in Developing Countries. Failing Markets, Weak States. Edward Elgar Publishing Limited. Cheltenham. ISBN 978 1 781000250

Schoen, C. (2014). Green LRED Concept Note, 2nd Draft April 2014. ProGED Project, Philippines.



05

Bottom-up industrial policy at territorial level

Dr Shawn Cunningham

We are being increasingly approached to assist cities and large towns with bottom-up innovation and industrial policies in developing countries. There is a lot of literature on national industrial policies, but how these can be applied at an urban or territorial level is not often discussed in much detail. Industrial policy is closely related to innovation systems policy and may even target similar institutions and actors, but differs in that it typically focuses more on structural change and addressing persistent market failures.

This article will provide some answers to four frequently asked questions about bottom-up industrial policy in developing countries, with the emphasis on green economic development and the circular economy (see article *From value chains to circular economic systems*).

1. Why does bottom-up industrial policy not emerge spontaneously in developing countries?

In cities and large towns in developing countries, it is an exception rather than the rule to find local stakeholders with a good track record of cooperation between the public, private and civil society aimed at ensuring

prosperity, attractiveness of the location and continued investment in appropriate public infrastructure. It takes strong leadership to start, maintain and expand such joint activities. This is harder to achieve in developing countries where there are many competing priorities (see article *Competing priorities: trade-offs between “green” and other topics*).

2. What does a bottom-up industrial policy look like?

Bottom-up industrial policies all look different as they are shaped by local priorities and the capacity to work together over extended time periods. The “policy” is actually an ongoing process of dialogue that results in collaboration. Successful policies recognise pioneers and support local initiatives.

In its infancy, bottom-up policy is more about coordinating a process than about planning. Planning becomes more important as early success attracts more participants with additional resources. Good project management becomes critical when multiple public and private organisations are contributing resources.

As more experience with local industrial policy is gained, the territorial portfolio becomes more balanced between short-term and longer-term priorities. Visionary local



leaders must constantly direct attention to matters that may be beyond the control or daily attention span of stakeholders. Successful policies maintain a balance between participatory processes and planning, but must also balance different time horizons. Where possible, support of short-term priorities should be done in a way that provides options or creates momentum for priorities with longer-term impact.

3. What is the role of meso institutions in bottom up industrial policy?

At the heart of industrial policy is the continuous effort of identifying and addressing pervasive or persistent market failures. These market failures often reveal themselves in symptoms such as underperformance of enterprises, high costs or consistent patterns of underinvestment in greener technology, or low growth. An important mechanism to address these issues are meso organisations that respond to these patterns, whether based in the territory or beyond.

Rodrik, Hausmann and Sabel (2008) identify three main types of persistent market failures that hamper development, also relevant at local level:

- a) *Self-discovery externalities*: Learning between different “agents” what new products can be produced profitably in an economy, and how.
- b) *Coordination externalities*: New local economic activities are often required simultaneous by different investors

upstream, downstream and in parallel or in related industries. For instance, to promote a circular value logic (see *article From value chains to circular economic systems*) would require stakeholders who may not even be aware of each others’ existence or interests to develop new concepts along a new value chain that does not yet exist.

- c) *Missing public inputs*: Private production typically requires highly specific public inputs – legislation, accreditation, R&D, transport and other infrastructure specific to an industry – of which the government and meso institutions often have little up-front knowledge.

Businesses find it hard to identify unique capability that exists in other businesses or in public institutions, therefore institutions that are aware of local capability in the private sector can play an important knowledge-brokering and coordination function. Meso organisations can play an important role in observing, capturing and communicating persistent patterns of failure from their area of expertise vertically to enterprises and government policy makers and horizontally to other meso level institutions.

Where the institutions do not yet exist, or cannot change, local development efforts will remain hampered until sufficient resources and political will can be harnessed to figure out which institutions should be established and which issues they should seek to address.

4. Why are meso organisations not responding to local issues?

We are often confronted by local institutions, government programmes or development agencies that are not able to respond to local priorities. This inability to respond to local requirements are due to the following reasons:

- a) Institutions may be designed to promote specific solutions in a supply push, with little incentive or leeway to adjust their offer.
- b) Current solutions may not be viable on near-term demand. This minimum viable scale is often created by limits in existing and affordable technology, but over time becomes possible due to innovation.
- c) Local plans may not be formulated in a way that shows how they enable national strategies or meet funding criteria specifications.
- d) Incomplete decentralisation or insufficient local accountability of nationally funded institutions, resulting in local stakeholders not being able to influence public resources and priorities.
- e) No institution having the authority or legitimacy to improve coordination between other institutions reporting to other government departments, i.e. a public coordination failure.

f) Funding or budgets that are determined very narrowly or inflexibly.

g) Simply not being interested in the local agenda

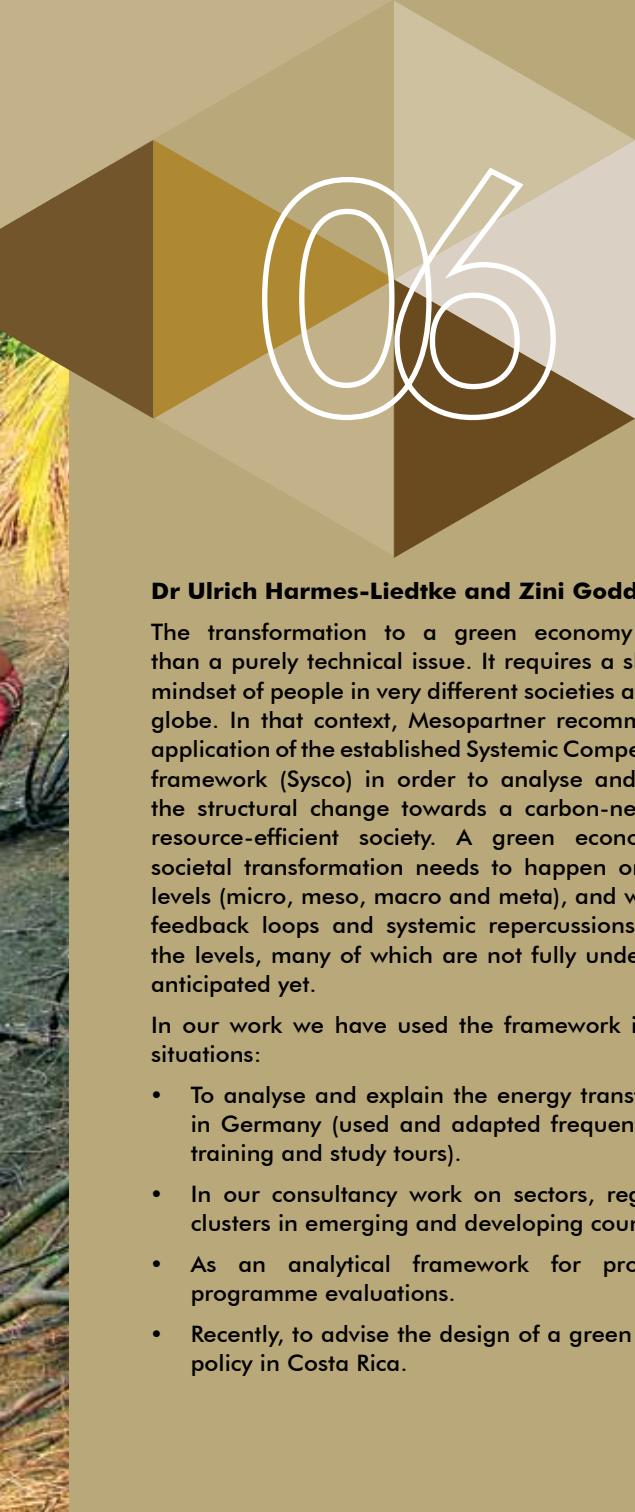
Not all these issues can be addressed from a local perspective. From our experience, clearly articulated strategies and strong lobbying of national departments can sometimes create small windows of opportunity where nationally controlled meso organisations can become interested and involved in addressing local requirements. In conclusion, bottom-up industrial development is a process of discovery of local constraints, but more importantly local opportunities. Over time, more planning and broader collaboration would depend on transparent planning. Autonomous meso level organisations are important in supporting these processes and also being responsive to local short-term and longer-term priorities.

References:

Hausmann, R., Rodrik, D. & Sabel, C.F. (2008). Reconfiguring industrial policy: A framework with an application to South Africa. Working Papers. CID Working Paper No. 168: Center for International Development, Harvard University







06

The meta level of greening territorial economies in times of climate change

Dr Ulrich Harmes-Liedtke and Zini Godden

The transformation to a green economy is more than a purely technical issue. It requires a shift in the mindset of people in very different societies around the globe. In that context, Mesopartner recommends the application of the established Systemic Competitiveness framework (Sysco) in order to analyse and promote the structural change towards a carbon-neutral and resource-efficient society. A green economic and societal transformation needs to happen on all four levels (micro, meso, macro and meta), and will trigger feedback loops and systemic repercussions between the levels, many of which are not fully understood or anticipated yet.

In our work we have used the framework in various situations:

- To analyse and explain the energy transformation in Germany (used and adapted frequently during training and study tours).
- In our consultancy work on sectors, regions and clusters in emerging and developing countries.
- As an analytical framework for project and programme evaluations.
- Recently, to advise the design of a green industrial policy in Costa Rica.

Sysco allows the inclusion of aspects such as behavioural insights in the analysis of the meta level. In this article we focus on the specific relevance of the meta level.

The meta level was described in the original Sysco publication by the German Development Institute (GDI) as the layer which "... is made up of solid basic patterns of legal, political and economic organization, an adequate social capacity for organization and integration, and the capacity of the actors to achieve strategic integration." (Esser, Hillebrand, Messner & Meyer-Stamer, 2008: 25). The meta level is important because it refers to the mindset and beliefs of people in a national or territorial economy. We have to understand how people think, where incentives or sources of resistance for change are, what they value and consider significant to know how feasible green transformation is, and which direction stakeholders can or should take.

Determinants of systemic competitiveness at the meta level are:

- The orientation of the groups of actors towards learning and efficiency.
- The protection of interests and self-organisation in changing conditions.
- The social capacity of the groups of actors for strategic interaction.

In that sense "... enterprise competitiveness is based on the organisational pattern of society as a whole", and the development of systemic competitiveness is described as a "social transformation project" (Esser et. al 2008: 21).

In the original paper Esser et al. (1996) state that "the environment was more a peripheral issue" (Messner, 2008: 51). Nevertheless, the Sysco framework is sufficiently versatile so that we can also use it to analyse and support the transformation of a nation or region to a low-carbon or green future.

Recent GDI publications again highlight the political or societal dimension of development. Today, the research is strongly focused on the green transformation and its relevance for developing countries.



Taking the example of energy efficiency (EE), the researchers refer to the gap between knowledge and implementation: there are numerous well-known benefits of EE, but consumers, organisations and societies as a whole are mostly hesitant about or sometimes resistant to taking these opportunities. It is not only about market failure – human behaviour itself can be another significant barrier to energy efficiency uptake. The authors propose the inclusion of "behavioural insights" in the design of EE programmes, which can also be extended to other green transformation policies (Pegels, Figueroa & Never, 2015).

The emphasis on the human factor is in line with increasing interest in behavioural issues by the global development community. The World Bank Report (2015) on *mind, society, and behaviour* aims to inspire and guide researchers and practitioners who can help to advance a new set of development approaches based on a fuller consideration of psychological and social influences. People do not always act in the rational way that (neo)classical economics assumes. Their behaviour is often contradictory: for example, it is biased towards the familiar and things they already own, and they





hold on to them even in situations where this causes economic loss (The World Bank, 2015).

According to the GDI researchers, we should consider four principles in order to incorporate behavioural insights:

- the cultural context of the target group
- the right time for the intervention (window of opportunity)
- drivers, preferences and motivations of the people's situation
- the overall fit of the intervention with a coherent package of measures (Pegels, et al. 2015: 1).

At the same time the authors emphasise the need to test and adapt the intervention, because even if the principles mentioned above are applied, an intervention can be ineffective or bring about contrary results. These findings help us to determine where to focus our attention when analysing and influencing the meta level.

As the SysCo framework was co-authored by the late Dr Jörg Meyer-Stamer, former researcher at the GDI and co-founder of Mesopartner, our company naturally

reverts to this framework and is interested in applying it to new questions. We have consistently found that SysCo is helpful to us in considering various elements that impact on territorial development, including why human beings behave in the way they do. In the context of this article, the meta level helps us to explore why and how people make the choice of whether or not to practice more resource and energy-efficient behaviour. Finding mechanisms to tap into this understanding of human behaviour without judgement is a critical starting point for reflection and gaining insight on how to support the shift to more sustainable choices.

References

Esser, K., Hillebrand, W., Messner, D. & Meyer-Stamer, J. (2008). *Systemic competitiveness*. Buenos Aires, Dortmund.

Pegels, A., Figueroa, A. & Never, B. (2015). *The human factor in energy efficiency*. Bonn.

The World Bank (2015). *Mind, society, and behavior*. Washington.



07

Can standards help developing countries phase into a green economy?³

Dr Ulrich Harmes-Liedtke

Climate change and planetary boundaries are global challenges, which require that all countries recognise the need to transform their economies and take action. The international community confirmed this necessity at the last United Nations Climate Change Conference, COP 21, held in Paris, and 174 countries signed the resultant agreement on 22 April 2016 in New York.

The green transformation was described as a “Herculean task” (Lütkenhorst, 2014: 3), which requires “... a fundamentally new growth model, sustainable patterns of behaviour and radical technological innovation ...” and “... must build on acceptance and support by society at large”. The challenge is especially serious for developing countries given their constant struggle to catch up with the leading countries.

There are different pathways for countries to phase into green technologies (see article *Shaping a climate smart*

and eco-friendly business environment), for example:

- The textbook case is that polluters pay compensation for the damage they cause. The payment can be mandatory, such as through formal mechanisms of carbon offset (e.g. carbon taxes or purchase of emission rights certificates) or voluntary payments for offsetting CO₂ emissions on air flights.⁴ These instruments create incentives to reduce negative external effects and support change towards a more sustainable economy, but they require a lot of coordination efforts.
- Another complementary way to promote green transformation is through setting “mandatory” *technical regulations* or *voluntary standards*. In this article we will explore “voluntary” standards.

The International Standards Organization (ISO) defines *standards* as a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose.⁵

³ This article was inspired by discussions within the PTB project, Promoting Innovation in the Green Economy by including Quality Infrastructure on behalf of the Federal Ministry for Economic Cooperation and Development (BMZ), Germany.

⁴ see <http://www.atmosfair.de>

⁵ <http://www.iso.org/iso/home/standards.htm>

One specific field is standards to promote the use of *energy-efficient household appliances*. For example, India started its Standards and Labelling Programme as early as 2006.⁶ The goal was to provide consumers with information about energy consumption and the related cost-saving potential of electrical appliances. About three years later, the voluntary labels had already gained credibility, and consumers had increased their preference for and purchase of labelled products. The Indian Bureau of Energy Efficiency has encouraged manufacturers to adopt approved testing systems and to self-certify their products, and it has built up a testing infrastructure to check-test samples of household appliances drawn from the market to verify the information provided by the manufacturer.

The Standards and Labelling Programme has thus developed a quality label that has created market transparency while helping firms to widen their product range and increase their product quality. At the same time, it has made a substantial contribution to energy saving in the country. These labels also reduce barriers to entry for participating enterprises, and at the same time make it easier for consumers to select products that are more ecologically responsible. Starting with voluntary standards and building on partnerships with powerful firms proved to be an appropriate strategy to prepare the market and phase in energy-efficient alternatives. Shifting later to technical regulations helped to phase out undesirable inefficient technologies (Chaudhary, Sagar & Mathur, 2012).

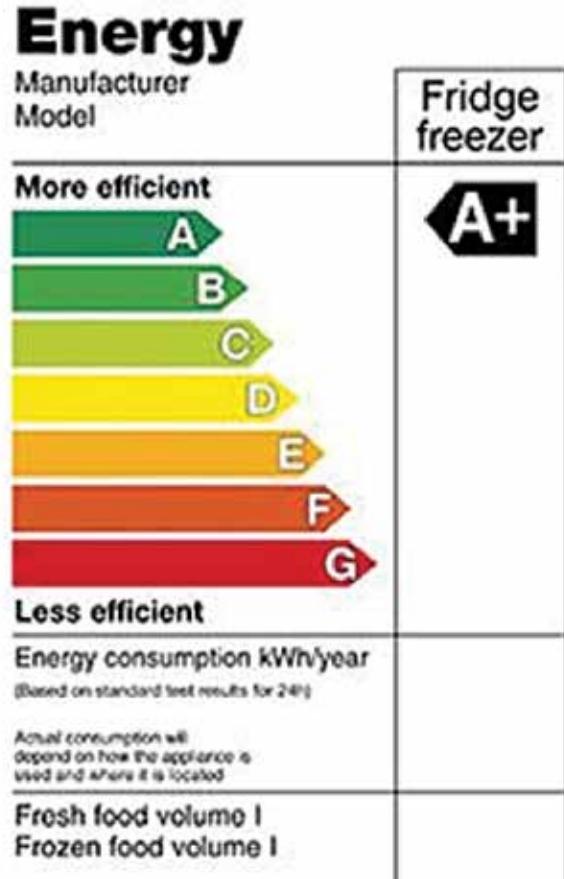


Figure 3: Label for energy efficiency
Source: <http://www.which.co.uk>



Another type of standard is *sustainability standards*, which explicitly claim to encourage more environmentally and socially responsible forms of production. These standards are also voluntary, usually third party assessed, and relate to environmental, social, ethical and food safety issues. Companies to highlight the performance of their organisations or products in specific areas adopt them. These standards have forcefully penetrated mainstream markets: for example, the sustainable coffee standards captured 40% of the market share of global production in 2012 (up from 15% in 2008) (Potts, Lynch, Wilkings et al., 2014).

Private standards are relevant because governments alone are unable to generate coordinated action at the global level. The growth of voluntary sustainability standards can largely be traced to a growing recognition of the failure of public action in addressing sustainability issues.

The benefits of standards for developing countries are not as obvious as they are for industrialised countries, as the latter have significant advantages, i.e. the main consumer base and standard owners are mainly located in developed countries and they have higher purchasing power. Nevertheless, developing countries can (or do already) benefit from green transformation by using standards in several ways:

1. Standards connect local producers to global green value chains/markets.
2. Standards help local consumers to make sustainable choices.
3. Standards based on local reality can become a

platform for the development of appropriate technologies.

4. Proximity to natural resources and local processing could be an advantage for a lower carbon footprint and lower resource use.
5. Standards codify indigenous fruits and vegetables and help them to reach foreign “novel food markets”.
6. “Designation of origin” certificates help to protect local indigenous products.



Figure 4: Labels of sustainability standards

Source: <http://www.standardsmap.org>



We also have to consider that standards increase transaction costs, especially for smallholders and micro enterprises (Osorio, 2008). The producers not only have to afford the costs of certification itself, but also the introduction and training to establish the required management and food safety systems. So producers in developing countries need support to really be able to benefit from standards. There is also a role for the lead firms in global value chains and the international development cooperation to support farmers and entrepreneurs in the transformation of their production (see private-public-partnership facility at <https://giz.de/de/.../giz2011-en-public-private-partnership.pdf>).

International cooperation is needed to build local capabilities in quality infrastructure services, such as testing and calibration laboratories, and certification and accreditation bodies. Without a local quality infrastructure, companies would need to buy these services from abroad at great cost, which would be another competitive disadvantage. On the other hand, a properly developed national quality infrastructure gives countries in the South the opportunity to adapt services to local needs and compete with exporting conformity assessment services.

Standards are a less explored mechanism to facilitate developing countries phasing into a green economy. Together with the German Metrology Institute (PTB) and the German Development Institute (GDI-DIE), Mesopartner has recently started to explore the relevance of standards for innovation and green transformation in the Latin America and Caribbean regions. Jointly with our clients and knowledge partners we hope to be able soon to provide more evidence on how standards can help developing countries to participate and benefit from green transformation.

Reference

Akerlof, G. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *Quarterly Journal of Economics*, 84 3 488-500.

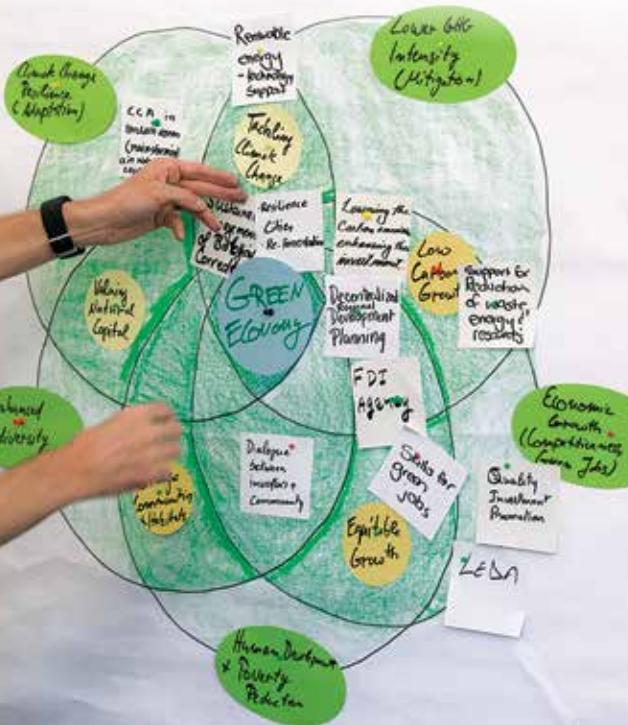
Chaudhary, A., Sagar, A.D. & Mathur, A. (2012). Innovating for energy efficiency: a perspective from India. *Innovation and Development*, 2(1): 45-66.



Lütkenhorst, W., Altenburg, T., Pegels, A. & Vidican, G. (2014). Green industrial policy: Managing transformation under uncertainty. Discussion paper, German Development Institute.

Osorio, L.E. (2008). Crossfire: Certification schemes can be more of a burden than a benefit. *Enterprise Development and Microfinance*, 19(20): 93-100, June.

Potts, J., Lynch, M., Wilkings, A., Huppe, G., Cunningham, M. & Voora, V. (2014). The state of sustainability initiatives review 2014: Standards and the green economy. International Institute for Sustainable Development (IISD) and the International Institute for Environment and Development (IIED): 332.







Driving forces for greening urban and rural locations in the EU

Frank Wältring

There are many efforts at present all around the world to “green” rural locations and cities. Entry points are manifold, and the driving forces often differ in more and less developed countries. During (green) study tours in rural and urban economies in Germany as part of our consultancy work, we often reflect jointly with our partners on the key driving forces for “greening” economic development activities. Although circumstances are different, the participants are often provided with pertinent insights into important determining factors. This article summarises the reflections from several tours in the European Union (EU). The argumentation here is in line with our considerations of a climate-smart and eco-friendly business environment, which deploys pulling (finance/economics), pushing (policy/regulations) and enabling (knowledge/skills) forces (see *article Shaping a climate smart and eco-friendly business environment*). Key questions we try to answer are: What more specific driving forces behind the greening efforts in some rural and city areas have been identified? What is the difference between them? Why are driving forces relevant to our work?

Green targets in the EU and Germany

Greening of locations is a key element of urban and economic development strategies of the European

Commission. The 2030 framework for climate and energy sets targets such as a 40% decrease in greenhouse gas emissions (compared to 1990 levels), almost 30% of energy is to be provided by renewable sources and 27% energy savings to be achieved. National targets in Germany have even higher objectives. Such targets must be implemented in rural and urban locations where people live, work and produce. .

Although the main argument for “greening” is climate change and environmental degradation and hence the requirement to change consumption and production patterns, it is often justified by competitive advantage in new industries and technologies due to the business opportunities which greening entails.

Driving forces of greening in rural areas in the EU

Costs: For a long time, energy costs in the EU have been too low to encourage large climate-sensitive investments. But the rise of these costs over the past years and additional pushing factors such as public construction standards for housing insulation and CO₂ consumption have encouraged investments in the renovation of buildings, the building of smaller houses, the use of energy-efficient heating technologies and energy efficiency in production processes in general.



Attractiveness: Funding competitions for climate-sensitive villages and towns have been promoted by regional governments, often supported by EU funding, to encourage rural locations to develop green consumption strategies such as the installation of solar panels on roofs, local market and consumption cycles and self-organised transport systems. Pulling factors such as providing financial incentives make these locations more attractive, as they demonstrate ambition and future orientation.

Modern image: Many rural areas have an image of being backward and lacking in lateral thinking. Many industrialised and polluted locations and cities in decline face the same lack of creativity. Greening activities require people to think and act in more innovative ways. At the same time, these efforts help to develop the image of a more modern and attractive place where more creative outsiders search for jobs or for whom living conditions are important.

New income sources: Renewable energy, e.g. generated by wind turbines, solar panels or biogas plantations, has substantially changed the income structure of a critical mass of farmers and other local investors. In Germany the majority of investments into the renewable energy sector originate from local inhabitants who benefit from subsidised prices for renewable energy.

Autonomy and decentralised energy creation: Many municipalities are interested in reducing their dependence on large and powerful regional energy suppliers. Furthermore, places that suffer from a brain drain and outward migration are challenged by reduced public revenues and reduced investment flexibility into energy infrastructure. Both factors have led to an increasing interest in energy autonomy by local as well as national governments.

New business opportunities: Rural tourism as well as the ecological production of, for instance, organic food targeting the urban middle class have become an important basis of new business opportunities in rural areas. Due to the good transport infrastructure, smaller villages around cities become hubs of food production, processing, packaging and delivery to city dwellers.

This is further made possible by online ordering and strong cooperation by rural communities to ensure timely production and delivery.

Driving forces for greening in urban areas in the EU

Many of the above-mentioned driving forces are also relevant for towns and cities. They include energy costs, attractiveness and the change of locational image. But there are also a few additional forces.

Developing and applying innovation: Cities are the places where innovation networks between R&D, business clusters and public sector actors must come up with new enabling solutions to the development of green technologies, improved and integrated mobility and energy systems. In addition, qualified labour and expertise for green innovations mostly originate in cities with a diversified educational infrastructure that allows the mixing of ideas, disciplines and technologies. It is also there where most production is still located and where environmentally friendly services and know-how accumulate and are often most in demand.

Waste management and recycling pressure: Most of the waste is still produced in cities but also accumulates from rural areas. Finding the right solutions to reduce and manage waste but also to recycle it in ways that are energy- and resource-sensitive is an increasing challenge that is forcing city administrations to come up with new solutions. At the same time, it provides new opportunities for businesses to be creative.

Managing boundaries of growth: Fast-growing cities in particular are challenged by fixed boundaries which limit growth. Many cities will not be able to absorb the increasing numbers of people without concerted efforts to increase their eco-friendliness as the population density increases.

Satisfaction of middle class demand: In general, cities have different product demands to those of rural areas. The upper middle class often demands more environmentally friendly products, healthier locations and an attractive culture. They also have the necessary purchasing power to pay for their sophisticated demands. A higher population density places more demands for clean air, elimination of



pollution and the establishment of green areas and parks.

Urban-rural linkages for recreation: These are relevant because attractive cities require attractive surroundings. Appealing rural areas contribute to the attractiveness of cities as long as they provide recreational value and access to fresh agricultural products.

Identification of driving forces to explore more complex sensitive interventions

Why is it important to reflect on the various driving forces in different countries and different localities? This article shows that driving forces vary from location to location. We have to be aware that the context differs in each location and that enabling, pulling and pushing factors in favour of or against the greening of certain locations strongly influence each other. During our study tours we found that participants started to think about what they could replicate. In reflection rounds, we emphasise that it is more relevant to understand own context, and that just copying something will most probably not work in a different context. The value of such study tours to the participants is that they can identify driving forces in the economic systems that they visit and compare them with their own context. This helps them to develop ideas of where to start analysing their own local context. During and at the end of our tours we organise a reflection workshop to encourage this thinking process. This includes working with the participants on the design of an exploration phase in which a portfolio of interventions can be tested in order to better understand the dynamics of their respective local systems.





Innovation requirements of a climate-smart location

Frank Wältring and Christian Schoen

In innovation promotion and local economic development, we often emphasise the importance of developing competitive advantages in order to survive or even advance in a competitive and innovative locational environment.

“Smart” vs. “Climate smart”

Being smart in this context means being able to compete and to innovate, ideally in a more advanced way than other regions. There is a clear need to widen the scope and support not only economically “smart” development paths, but also “climate smart” locations.

“Climate smart” adds an additional dimension. It is based on the belief that smart and lateral thinking people are needed to devise new solutions that decrease greenhouse

gas emissions and increase protection against climatic events, while economies continue to grow. Thus “smart” is understood not only in terms of competitiveness, but also in terms of climate resilience and eco-friendliness.

Rankings of medium-sized European cities use six classifications for smart locations (see Figure 5), of which the smart economy criterion is only one of these. Accordingly, the growth of urban and rural sites can become more sustainable and resilient as long as “smarter” environmental technologies, natural resource management priorities, new governance and network formats are based on people’s creativity and interdisciplinary approaches. Integrated systems consisting of new mobility solutions, renewable and energy-efficient technologies, less resource-intensive production and consumption processes, etc. need to be created to achieve balanced and innovation-oriented growth combined with a high quality of life.

SMART ECONOMY (Competitiveness)

- Innovative spirit
- Entrepreneurship
- Economic image & trademarks
- Productivity
- Flexibility of labour market
- International embeddedness
- *Ability to transform*

SMART PEOPLE (Social and Human Capital)

- Level of qualification
- Affinity to life long learning
- Social and ethnic plurality
- Flexibility
- Creativity
- Cosmopolitanism/Open-mindedness
- Participation in public life

SMART GOVERNANCE (Participation)

- Participation in decision-making
- Public and social services
- Transparent governance
- *Political strategies & perspectives*

SMART MOBILITY (Transport and ICT)

- Local accessibility
- (Inter-)national accessibility
- Availability of ICT-infrastructure
- Sustainable, innovative and safe transport systems

SMART ENVIRONMENT (Natural resources)

- Attractivity of natural conditions
- Pollution
- Environmental protection
- Sustainable resource management

SMART LIVING (Quality of life)

- Cultural facilities
- Health conditions
- Individual safety
- Housing quality
- Education facilities
- Touristic attractiveness
- Social cohesion



Figure 5: Six characteristics of smart cities
Source: Giffinger R., et al., 2007.

Climate-smart cities, towns and villages

The discussion on a model of “climate-smart locations” initially targeted metropolitan and medium-sized cities, towns and villages in developed and developing countries that needed to adapt to climate change risks due to climatic events such as flooding, storms, heat waves, droughts, changing rain patterns, etc. In the meantime, the topic has become more mainstream and is being extended to climate change mitigation and has become the centre of attention of many European locations as well. Climate-smart commune contests are organised in many EU countries, especially targeting smaller towns and villages that want to become more energy efficient and independent. The ranking criteria in Figure 5 are based on efforts in medium-sized cities in Europe to become more environmentally friendly and attractive. Being a climate-smart location in Europe has become a vehicle for locational marketing as well as being an indication of innovative and future-oriented locational management. In developing countries, fast-growing cities and their environmental boundaries as well as locations vulnerable to climate change have additionally encouraged this discussion.

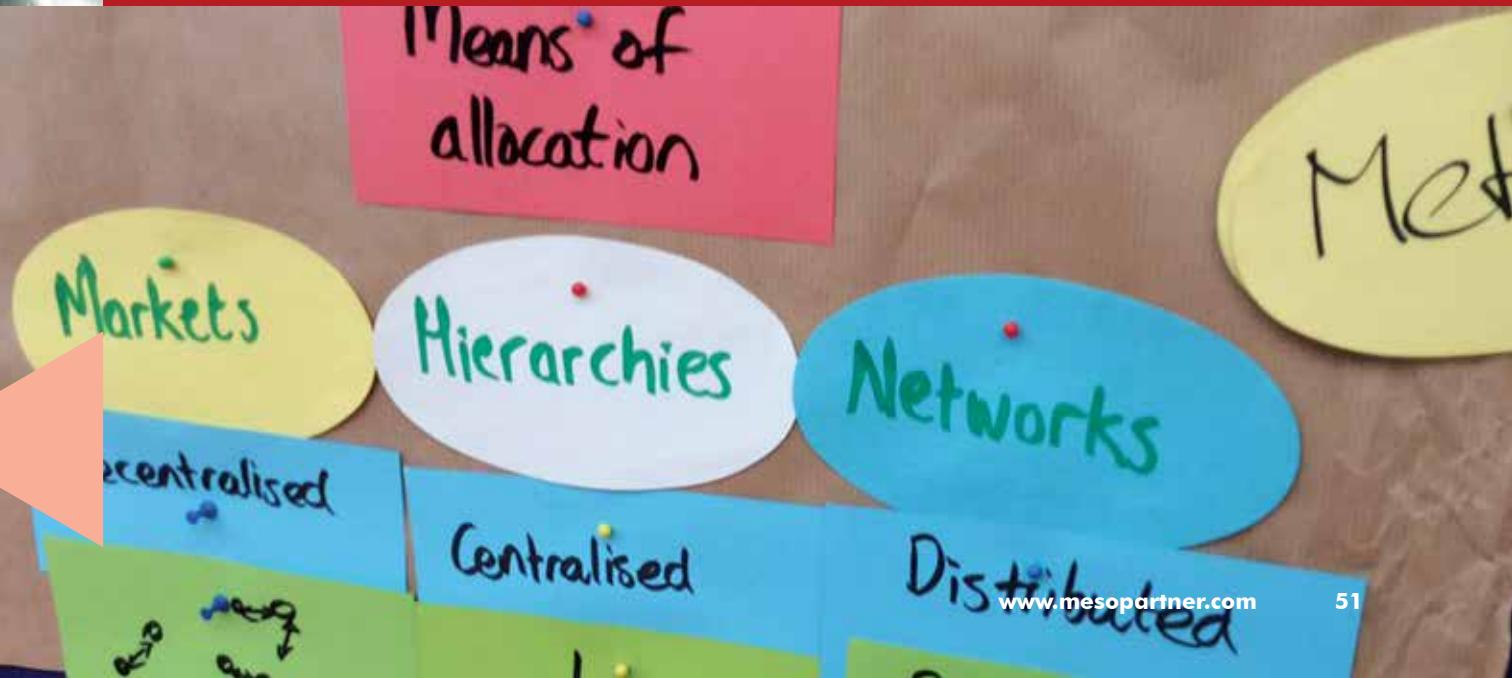
Requirements for learning

What does this all mean for our work? What kind of learning is required from us as consultants, for development organisations and for local stakeholders responsible for the management of locational growth? What does it mean for businesses?

We have identified two main challenges:

- The complex and interdisciplinary solutions required for climate-smart locational development.
- The need for more holistic approaches to promoting climate-smart solutions.

The complexity and interdisciplinary learning requirement “Masdar City” is a city-building project in the United Arab Emirates close to Abu Dhabi. It is an eco-city that was built from scratch with the most suitable mobility, water and renewable energy solutions. Mostly “smart” international experts and engineers have been involved in building this city. Although Masdar City is expected to become a climate-smart city, it will probably not serve as a model for the majority of other locations. Not every city will be able to follow this cost-intensive and external





expertise-based approach. More difficult than bringing in investment capital and expert support is to figure out how tailor-made climate-smart strategies could be developed on a realistic basis. This requires information on the availability of the required knowledge and expertise inside the country or region, the identification of driving forces (see article *Driving forces for greening urban and rural locations in the EU*) and motivated stakeholders plus the joint identification of system solutions in which renewable energy, energy-efficient efforts and mobility as well as infrastructure and production processes are analysed and mutually connected.



Referring to the six characteristics of smart locations in Figure 5, we can identify places such as the capital of Luxembourg or Aarhus in Denmark as first-ranked medium-sized European “smart” cities which build their development on those six characteristics. Unlike Masdar, such locations are not set up from outside by centralised decision or by technical expertise alone. Their approach is rather based on integrated and systemic solutions within an open-minded societal model in which local experts, knowledge providers, technological capabilities at the business and institutional level, interactive knowledge and learning flows merge together. Instead of developing and implementing whole system solutions from the outside, we need to understand how to support the transformation processes in those places by increasing the capabilities of relevant actors and systemic solutions from the inside.

More holistic knowledge requirements

The climate-smart location approach considers different entry points (see Figure 6). It not only focuses on productive or service-driven business sectors, but also requires knowledge and expertise in key areas that contribute to or are challenged by climate change and pollution. Our partners and us need to identify and learn more about technological solutions and different areas of concern with a wider target group. Not only businesses and their supporting institutions are involved, but also public actors such as utility providers, private households and others along different kinds of chains, such as transport, logistics and waste.



Figure 6: Sectoral entry points
 Source: <http://www.climatesmartcities.org>

The partners in developing countries will have to approach local economic development with a climate-sensitive mindset that is related to the development of endogenous potentials along the six characteristics mentioned above. Urban and rural locations in Europe might be interesting cases to learn from in this respect. On the other hand, European or German technology transfer institutions, donor and government organisations need to consider more strongly that the sustainability of climate-smart locations in developing countries depends on the involvement and upgrading of local human and institutional knowledge, not just on using imported green technologies and external expertise. Masdar City in this respect cannot be the role model.

Reference

Giffinger, R. et al. (2007) Smart cities: Ranking of medium-sized European Cities, Vienna.





10

Eco-system services and territorial competitiveness⁷

Dr Ulrich Harmes-Liedtke

The traditional approach to competitiveness is based on labour or capital productivity (Porter, 1989). Given the over-exploitation of natural resources, today we can observe a changing basis of competitive advantage (Von Weizsäcker, De Lardereel, Hargroves et al., 2014). A major challenge and source of future growth is now to increase resource efficiency (in other words, achieving more with less). Regions and nations that produce greater economic value with fewer resource inputs (both material and energy) will become more competitive. The McKinsey Global Institute estimates that resource productivity has the potential to earn US\$2.9 trillion each year by 2030 from resource savings (Von Weizsäcker et al., 2014).

Nature provides valuable environmental services free of charge. All businesses benefit from these services as inputs, but individual firms have no incentive to finance conservation fully (this is called the free rider problem). In that sense, ecosystem services are public goods. It is technically not possible to exclude players who do not pay to use. This typically leads to the situation of overuse and unsustainable exploitation of ecosystems, ending in strong degradation or even depletion. This is called the tragedy

of the commons (Bustos, Gomez, Hausmann et al., 2012; Alemu, 2016), which can be overcome in several ways. The use of environmental resources can be limited, and/or finance conservation activities can be supported:

1. The Government taxes the beneficiaries (mandatory solution)
2. The beneficiaries are self-organising and contribute voluntarily (network solution).

No matter which mode is chosen, companies benefiting from services can be asked to contribute to environmental conservation and sustainable use of natural resources. The graph in Figure 7 illustrates two situations with regard to the relationship between ecosystems and a local economy:

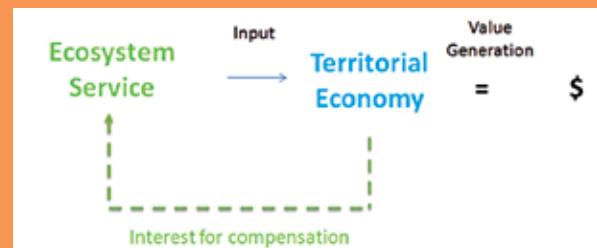


Figure 7: Relationship between ecosystem and territorial economy

Source: Author's own elaboration

⁷ This article was inspired by the collaboration of the GIZ Project Implementation of the National Biocorridor Programme (PNCB) within the context of Costa Rica's National Biodiversity Strategy on behalf of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) as part of the International Climate Initiative (IKI).



Figure 7 shows a simple mechanism of how a territorial economy uses ecosystem services as inputs. Since the territorial economy depends on the integrity and functioning of the ecosystem, economic actors should be interested in contributing to its conservation. However, the willingness to contribute is often less than the benefit received due to the free rider problem.

The alternative way is to increase the benefit of the territorial economy through the use of environmental services by encouraging green businesses. This is expected to generate more economic value without harming the environment, as it could take advantage of the increased value generated to provide more resources for conservation. Figure 8 shows how the combination of green business promotion and a formalised mechanism of compensation – whether voluntary or mandatory – could make the two systems mutually beneficial.

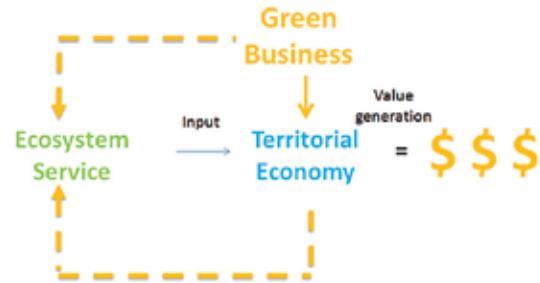


Figure 8: intervention for sustainable economic development

Source: Author's own elaboration

If a local community intends starting to fully value the economic benefits of using nature, they should seek answers to the following questions (TEEB, 2010):

- What ecosystem services are central to our local community and economy?
- Who depends on these ecosystem services?
- What natural assets are at risk?



- How will policy action affect these natural assets and the services they provide?
- How can we promote green business opportunities to contribute to a more sustainable location?⁸

A participatory process and dialogue among stakeholders can generate initial answers that will help to direct policy. In conclusion, we can affirm that wasteful use of natural resources and limited concern for natural systems will destroy nature. Maintaining healthy ecosystems is ultimately a better, less expensive option. The promoters of local economic development need to assess and tend their natural resource base to increase long-term competitiveness. Even though not all ecosystem services are influenced by local action, it is easier to introduce compensation mechanisms locally, given that cause and effect are more directly linked (free rider problems can be reduced by social pressure). Finally, a harmonious relationship between local economy and ecosystems can only be created by collective action of public and private stakeholders, which is the basis for development and wellbeing.

References

- Alemu, M. M. (2016). Ecosystems and the services they provide. *Journal of Sustainable Development*, 9(3).
- Bustos, S., Gomez, C., Hausmann, R. & Hidalgo, C.A. (2012). The dynamics of nestedness predicts the evolution of industrial ecosystems. *PLoS one* 7(11).
- Porter, M. E. (1989). *The competitive advantage of nations*. Collier Macmillan, London/ New York
- TEEB (2010). *The economics of ecosystems and biodiversity for local and regional policy makers*. Malta. Available online at <http://TEEBweb.org>
- Von Weizsäcker, E. U., De Lardereel, J., Hargroves, K., Hudson, C., Smith, M. & Rodrigues, M. (2014). *Decoupling 2: technologies, opportunities and policy options*. UNEP, Nairobi.

⁷ The first four questions are quoted from TEEB (2010). The last question emerged from our advisory practice.





11

From value chains to circular economic systems

Dr Shawn Cunningham, Marcus Jenal and Ulrich Harmes-Liedtke

While value chains and product networks are often optimised for efficiency at the levels of products, firms and transactions, the overall systems they form part of may not be optimally efficient from a resource utilisation perspective. For instance, the May 2016 edition of National Geographic highlighted the staggering wastage in the food production system, where “ugly” produce not deemed suitable for retail or imperfect food is wasted. While the food value chain may appear efficient at the level of the supply chain, at a broader system or society level the system is inefficient. It is characterised by overproduction, waste and other inefficiencies, such as wastage of water, energy, etc. Taking this higher-level perspective of production and consumption systems is the first step towards understanding the concept of the circular economy.

The Ellen MacArthur Foundation describes circular economy as “restorative and regenerative by design, and aims to keep products, components, and materials at their highest utility and value at all times”. A circular economic system seeks to rebuild or preserve capital, whether this is financial, manufactured, human, social or natural. This ensures enhanced flows of goods and services, and challenges today’s model, which depends on the

continuous extraction and unidirectional conversion of raw materials that have physical, capital and environmental limits.

The shift towards a circular economy is driven by a combination of factors such as:

- The increased awareness of the costs of our lifestyle to the environment
- The effect of our environment on our collective wellbeing and health
- Successful lobbying by environmental groups
- The effects of urbanisation and densification and the accompanying increase in waste
- The increasing costs of products that need to comply with regulations with regard to packaging, disposal, etc.

While increased environmental awareness and improved regulations have resulted in more of the indirect costs to society being allocated to producers, many of the costs cannot be attributed to producers and users, and so the society or future generations must pay. However, the logic of the circular economy goes beyond arguing about who should pay for the direct and indirect effects of the production and consumption of products and resources – it highlights the fact that even when costs are fully accounted for, many products and services are still inefficient at a higher system level in terms of how raw materials, capital



and resources are used. The argument goes far beyond recycling or being sensitive to environmental effects.

At any of the global environmental or development conferences, chances are good that there will be discussions about the circular economy and global responsible use of resources. However, in many developing countries, especially at a subnational level, this debate hardly takes place beyond small groups of environmentalists and government officials responsible for environmental issues. The effect of the circular approach on locations in developing countries primarily engaged in value chains that export raw material is still not fully understood. Nor are the full benefits and savings to a society clear, even in the developed world. Our argument is that locations or industries depending on global chains that become “circular” could be vulnerable. In a circular model, industrialised countries would seek to reduce their dependence on “fresh” raw materials such as food, natural fibres or minerals that many developing countries depend on for export and employment.

There are three implications for developing countries as the global trend of the circular concept increases. Firstly, local stakeholders must become aware of the opportunities, threats and benefits of a more circular logic in the economy they are part of. If stakeholders are not aware of these shifts or they ignore these changes, then they may be caught by surprise when local industries become unable to export, or when key inputs suddenly become harder to find. Just as with other technological shifts, incumbent enterprises may at first ignore these coming shifts due to sunk costs, path dependence or ignorance.

Secondly, many developing countries are struggling to cope with rapid urbanisation, increased waste created by urban lifestyle, deteriorating environments combined with climate change affecting the rural areas. The circular logic could be beneficial as it saves resource consumption and at the same time seeks to improve the environment.

A third implication is that developing countries will have to invest in publicly funded programmes to promote exploration and discovery of the circular logic. The circular





logic could be used as a topic to enable dialogue and an opportunity to mobilise a broad range of stakeholders to explore ways of better using all kinds of resources in a society. It may require investments in applied research, or in funding experimentation with new ideas. Creative ways must be found to turn the dialogue and concerns about sustainability into an ongoing discovery process supported by demonstrating innovative ways of reconceptualising how a society designs, makes, uses and reuses natural resources.

Some argue that the circular economy is overhyped and will only benefit the well-off consumers and producers who can afford the luxury of superior design, materials and reuse options. Even if there is a lot of hype generated around the circular economy in the media or at global events, there are still important principles that should be considered by policy makers, development practitioners and innovators. It is to be expected that some would be threatened by this circular logic, as it could disrupt established norms, supply chains, investments and markets.

For existing enterprises, rethinking their whole business model, product design, processes, supplier networks and relations with clients is an expensive, risky and time-consuming effort. It may simply be too difficult to think beyond a certain paradigm. The required public infrastructure or coordination with many other actors may be prohibitively expensive. Or customers may simply not

be interested in paying more for a “circular” product when cheaper alternatives exist. As with other technological shifts, many companies will probably not consider changing much until they sense a strong demand, or when competitors, key markets or regulations leave little choice but to respond. But this could be too late. For new entrants not trapped in current paradigms, the costs of rethinking or re-imagining how a system could work may be lower than for an existing enterprise. They will, however, also face risks and costs when they have to try their ideas in markets, or coordinate their own investment and development with those of others.

For territories in developing countries, a starting point could be in food production and consumption. Areas of excessive wastage of resources could be identified, and collective action could be taken to reduce all forms of wastage. There are also interesting advances in the use and processing of natural fibres. Another starting point could be to identify enterprises, groups and scientists who are interested in promoting a more circular approach, and to nurture their exploration and experiments by providing public support and investment. Once there is sufficient interest and initial champions have emerged, forward-thinking territories should invest in developing pilot programmes to reduce risks and test ideas, promote uptake or to demonstrate concepts. Eventually investments in applied research, technology transfer and education programmes would be needed to broaden the uptake in a society.

In conclusion, while the circular economy concept is still fairly new and in some instances abstract, development practitioners working in territorial economic development should take note of its implications and its logic. Some of the ideas are valuable, such as broadening the understanding of “resource use” beyond raw materials, conversion and energy consumption, or thinking of the product from the start all the way back to a new beginning. As cities grow faster, resources become more stretched, waste increases and environmental effects become more pronounced. Therefore finding ways to conserve resources, reduce wastage and at the same time attempt to improve the environment will become more important. Above all, for us the circular economy creates an opportunity for innovation while improving the environment.



Mesopartner's strategic clients 2015/2016

Alvarium Consultancy Company, Armenia

Care International in Myanmar, Growing Rubber Opportunities (GRO Myanmar) project, Myanmar

Council for Scientific and Industrial Research (CSIR), South Africa

Department of Science and Technology, South Africa

Department of Trade and Industry, South Africa

EDA Development Agency Banja Luka, Bosnia and Herzegovina

EWG Rheine - Entwicklungs- und Wirtschaftsförderungsgesellschaft Rheine

Genesis Analytics, South Africa

GIZ Basic Entrepreneurial Skills Development Programme (BESD) South Africa

GIZ Capacity Strengthening for Private Sector Development, Myanmar

GIZ Innovative Employment Programme, Timor-Leste

GIZ Program for Economic Growth, Namibia

GIZ ProGED Philippines

GIZ Sector Project Sustainable Development of Metropolitan Regions

GIZ Sustainable Economic Development Program Uzbekistan

GIZ Sustainable Regional Economic Growth and Investment Programme (SREGIP), Indonesia

GIZ Open Regional Fund for the Economy and (Youth) Employment in Central America (FACILIDAD)

GIZ Implementation of the National Biocorridor Programme (PNCB) within the context of Costa Rica's

GIZ Skills for Green Jobs Project, South Africa

National Biodiversity Strategy commissioned by German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) as part of the International Climate Initiative (IKI)

International Labour Organization (ILO), Entrepreneurship and SME Support Programme, Myanmar

International Labour Organization (ILO), Regional Office for Asia and the Pacific, Bangkok

Jacobs-University Bremen

International Labour Organization (ILO), Head Office, Geneva

Practical Action, United Kingdom

PTB, Physikalisch-Technische Bundesanstalt, National Metrology Institute, International Technical Cooperation, Germany

Nelson Mandela Metropolitan University, South Africa

Technology Station in Electronics, Tshwane University of Technology, South Africa

Tshwane University of Technology, Faculty of Engineering and the Built Environment, South Africa

UNDP, Indonesia

UNHCR, South Africa

University of Leipzig, Germany

UNSAM, Universidad Nacional General San Martin, Centre for Territorial Development (CEDET), Argentina

UNGS, Universidad Nacional General Sarmiento, Argentina

WEST GmbH - Wirtschaftsförderung Kreis Steinfurt

Countries in which

Mesopartner is currently active 2015-2016

Argentina
Armenia
Bangladesh
Barbados
Belize
Bolivia
Bosnia and Herzegovina
Botswana

Chile
Colombia
Costa Rica
Georgia
Germany
Kyrgyzstan
Indonesia
Israël

Morocco
Mozambique
Myanmar
Nigeria
Peru
Philippines
Romania
South Africa
South Korea
Suriname

Tanzania
Thailand
Timor-Leste
United Kingdom
Uruguay
Uzbekistan
Vietnam
Zambia





The Partners

Shawn Cunningham

Zini Godden

Ulrich Harmes-Liedtke

Marcus Jenal

Christian Schoen

Frank Wältring

SHAWN CUNNINGHAM

sc@mesopartner.com



Born 1973. PhD, 2009 and MBA, 2001 from the Potchefstroom Business School, North-West University, South Africa. Certificates in change management, project management, strategic management, social network analysis and complexity.

Based in Pretoria, South Africa.

Main fields of expertise:

Advisory support to leaders in government, business and academia to make decisions despite complexity and uncertainty
Private sector promotion and meso organisation development
Science, Technology and Innovation systems promotion
Innovation, discovery and action/applied research
Industry modernisation, technological capability development
Process consulting, discovery and process facilitation

Working experience:

Since 2008: Partner in Mesopartner
2015 - current: Part time Faculty Member (Innovation, Strategy & Technology Management), Stellenbosch Business School, Executive Education
2010 – current: Research Associate (Innovation Systems & Policy) at the Institute for Economic Research on Innovation, Tshwane University of Technology, South Africa
2011 – 2013: Postdoctoral research fellow (Technology Transfer and Innovation) at Vaal University of Technology
2003 – 2007: Senior expert in the GTZ South Africa Local Economic Development and Business Development Services Programme
2001 – 2002: Worked in a South African development agency National Manufacturing Advisory Centre Programme
1996 – 2001: Own business in the IT sector

ULRICH HARMES-LIEDTKE

uhl@mesopartner.com



Born 1965. PhD in political science and economics (Bremen 1999), MA in Economics (Hamburg 1991).

Based in Chascomus, Argentina.

Main fields of expertise:

Territorial economic development
Cluster and value chain promotion
Standards and quality infrastructure
Industrial Policy
Green Economy
Coaching and methodology development

Working experience:

Founding partner of Mesopartner (2003)
1997 – 2002: ISA Consult GmbH, Bochum (Germany), senior consultant
1996 –1997: Foundation CIREM, Barcelona (Spain), junior consultant
1991 – 1994: University of Bremen, research project on regional development in Europe, researcher.

CHRISTIAN SCHOEN

cs@mesopartner.com



Born 1965. MA in economics (Munich, 1991).

Based in Hanoi, Vietnam

Main fields of expertise:

Local and regional economic development

Value chain and cluster development

Business/investment climate surveys and competitiveness rankings

Pro-poor approaches to economic development

Green economic development

Program and project evaluations

Working experience:

Founding partner of Mesopartner (2003)

2001 – 2002: Fraunhofer Gesellschaft e.V., Jakarta (Indonesia), PERISKOP project coordinator and senior consultant

1999 – 2000: Fraunhofer Management GmbH, Munich (Germany), senior consultant

1992 – 1999: Dorsch Consult Ingenieurgesellschaft mbH, Munich (Germany), consultant.

MARCUS JENAL

mj@mesopartner.com



Born 1980. Diploma (MSc) in Environmental Sciences from the Swiss Federal Institute of Technology (ETH) in Zürich, 2007.

Based in Gateshead, United Kingdom

Main fields of expertise:

Advisory support for decision makers facing uncertainty and complexity

Monitoring and evaluation of adaptive and evolving projects and systemic change initiatives

Narrative research and participatory sensemaking

Market Systems Development

Knowledge network and community of practice facilitation

Working experience:

Since 2015: Partner of Mesopartner

2014-present: Lead, monitoring, impact evaluation and evidence, the BEAM Exchange

2011-present: Member of the backstopping team for the employment and income network of the Swiss Agency for Development and Cooperation (SDC).

2011-2015: Independent consultant in market systems development and systemic approaches

2009-2011: Programme officer at Intercooperation (now HELVETAS Swiss Intercooperation), Bangladesh.

ZINI GODDEN

zg@mesopartner.com



Born 1966. Master's degree in Public and Development Management, University of the Witwatersrand, 2006.

Based in Pretoria, South Africa.

Main fields of expertise:

Local and Regional Economic Development
Event and Process Facilitation
Monitoring and Evaluation
Leadership and Personal Development Training

Working experience:

Since 2013: Partner in Mesopartner
2011 – 2013: Support for GIZ's Chamber and Advisory Network and Cooperation for Women Entrepreneurs (CHANCE)
2011: Coordination of GIZ's Regional and Local Economic Development (RLED) and Trade Promotion programme
2008 – 2010: Management of InWEnt's Locati (Local Competitive Advantage Training Initiative)
2004 – 2009: Local Economic Development Consultant: MXA
1996 – 2003: Programme Manager for the Netherlands-supported Youth Development Programme, Local Government Programme as well as the Gender Programme

FRANK WÄLTRING

fw@mesopartner.com



Born 1968. MA in social sciences with specialisation in economics (Duisburg, 1999).

Based in Bremen and Elte, Germany

Main fields of expertise:

Promotion of innovation and living spaces in rural and urban areas

Local and regional economic development

Local innovation system promotion

Cluster and Value chain promotion

Co-working and Innovation Lab Design

Working experience:

Since 2004: partner in Mesopartner

2016 & 2017: Lecturer at Jacobs-University Bremen on Development Economics and Innovation Economics

2007 – present: Lecturer at the SEPT Master Course from the University of Leipzig in Leipzig, Hanoi and Ho-Chi-Minh-City on the topic of Regional Competitiveness

2003 – 2004: Private sector development specialist at GTZ headquarters, special focus south-east Europe

2001 – 2003: Junior professional in GTZ private sector development programme in Honduras

1999 – 2001: Researcher in joint INEF/IDS local cluster and global value chain project, Institute for Development and Peace, University of Duisburg.

MESOPARTNER'S ADMINISTRATION



ANNELIEN CUNNINGHAM *ac@mesopartner.com*

Born 1974. Master's degree in Business Administration,
North-West University, South Africa

Based in Pretoria, South Africa

Annelien provides administrative and content support to Mesopartner. Her main tasks involve organising events such as the Summer Academy in Berlin, maintaining the website, managing the client database and customer communication. Her background in business enables her to provide content and fieldwork-related support to Mesopartner.

The Mesopartner Associates in 2016



**ADRIE EL
MOHAMADI**

aem@mesopartner.com

Born 1969. Studied Business Management at the University of the Witwatersrand, 2008. Based in South Africa.



**VALÉRIE
HINDSON**

vh@mesopartner.com

Born 1969. Institute of Political Studies (Sciences Po Aix), France, 1992. Based in France.



**DOUGLAS
HINDSON**

dh@mesopartner.com

Born 1946. DPhil (Development Studies) University of Sussex, 1983. Based in France.



**VARAZDAT
KARAPETYAN**

vk@mesopartner.com

Born 1974, PhD from Moscow State University after Lomonosov, 1996. Specialisation in political economy.

Based in Armenia.



**ZDRAVKO
MIOVCIC**

zm@mesopartner.com

Born 1958. Master's Degree in Management with specialisation in solving development problems (UN University for Peace, ECPD Belgrade, 1991).

Based in Bosnia and Herzegovina and Serbia.



ANKE KAULARD
ak@mesopartner.com

Born 1975. University Degree in Latin-American Regional Sciences with specialisation in economics and political sciences (University of Cologne, Germany, 2003).

Based in Peru and Germany.



COLIN MITCHELL
cm@mesopartner.com

Born 1953. Studied accounting and auditing and completed articles in 1979. Based in South Africa.

MESOPARTNER PUBLICATIONS 2015 – 2016

CUNNINGHAM, S. & WÄLTRING, F.

2015. Innovation Systems in Metropolitan Regions of Developing Countries: Challenges, Opportunities and Entry Points. Discussion Paper. Bonn and Eschborn, Germany: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. [Web] http://www2.giz.de/wbf/4tDx9kw63gma/InnovationSystems_Metropolitan-Regions.pdf

HARMES-LIEDTKE, U., KRUIP, A. & GIL, A.S.

2016. Quality Infrastructure and Green Building: exploring interlinkages for a Greener Economy. World Resources Forum Latin America and the Caribbean and the International Sustainable Building Congress 2016, San José/ Costa Rica.

JENAL, M. & CUNNINGHAM, S.

2015a. Economic development: introducing options, not bringing solutions. Institute for Development Studies Opinion. Wach, E. & Thorpe, J. (Eds.). Institute for Development Studies (IDS). Sussex, UK. [Web] <http://www.ids.ac.uk/opinion/economic-development-introducing-options-not-bringing-solutions>

JENAL, M. & CUNNINGHAM, S.

2015b. Explore, scale up, move out – Three phases to managing change under conditions of uncertainty. IDS Bulletin, Vol. 26(3) Business, State and Society: Changing Perspectives, Roles and Approaches pp: 81-92.

SCHOEN, C.

2015. Assessment of Skills Gaps and Potential for Entrepreneurship Development in the Tourism Value Chain in Bagan, Myanmar. Participatory Value Chain Analysis. International Labor Organisation Myanmar.

For details of publications see

<http://www.mesopartner.com/nc/publications/>

Mesopartner books can be ordered at

<http://stores.lulu.com/mesopartner>

Books that we recommend are listed in the Mesopartner Amazon store at

<http://astore.amazon.com/mesopartner-20>





© Mesopartner

All photos in this report are original material taken by the Mesopartners or by the professional photographer Britta Radike
britta.radike@gmx.de

Edited by Christian Schoen
cs@mesopartner.com

Designed by Golden Sky, Vietnam
www.goldenskyvn.com

Printed in June 2016

Please direct any enquiries to:
Christian Schoen
cs@mesopartner.com

ISSN 2567-7756

www.mesopartner.com

Mesopartner Annual Reflection 2016