

Conference Report, Paper Abstracts

The conference speakers covered various aspects of sustainable development projects, ranging from the challenges the non-profit sector faces in developing strategies and the cultural dimensions of development projects to concrete examples of sustainable development endeavors around the world.

Professor Roberto Gutiérrez Poveda (Universidad de Los Andes) showed how distinct approaches for scaling up public facilities projects can achieve different results. He compared two cases of natural gas distribution in Argentina and Colombia. In the Argentinean case, although the number of gas users could be increased significantly, many low-income households located close to the pipeline could still not get any access to the service. By contrast, the Colombian company showed more commitment to widespread supply and was able to multiply its number of users through innovative financing schemes. Prof. Gutiérrez tested various hypotheses to explain those differences in managerial behavior. It seems that companies' social commitment, coordinated work with non-profit organizations as well as differences in legal frameworks for the creation of private incentives play an important role for the success in scaling up those kinds of projects. Following these case-based lessons, he lastly invited the audience to reflect on more effective ways to spreading social innovations into significant segments of population.

According to **Professor Rolf Wüstenhagen** (University of St.Gallen), there has to be a combination of intuition and rationality in energy-related decision-making. Rather than basing decisions on cost-benefit and risk-return evaluations, it is necessary to consider areas of bounded rationality (called «Epsilon») such as status quo bias, emotional influence, or peer group effects. The path dependence resulting from these factors slows down the scaling up of clean energy, but it can be overcome by several means, for instance by investing far away from

the home market, by increasing the number of competitors or by implementing a new default choice. Factors like peer pressure, technology diffusion, or the creation of positive affect are also important in this process, in which the State should encourage green energy and create a stimulating regulatory framework.

Lars Willi and Ulrich Hinterberger (Trunz Water Systems) emphasized the importance of transcultural communication skills and trust as main success factor of marketing their water purification units in Colombia. Global companies with very widespread and remote target markets face the challenge of inducing long-term thinking in their prospective clients, thus making them relegate personal benefit to a second level. This shift in priorities would make the acquisition of qualitatively superior products possible that in return have very low operational costs. One of the strategies adopted by Trunz is to make providers invest before selling them the product and thus forcing them to commit. Lars Willi presented the new Water Shop Concept, based on a triple bottom line approach that takes into account social, ecological as well as economic factors and intends to sell clean and safe drinking water to people in less affluent regions of the world such as the Philippines or the Parques Nacionales of Colombia.

Fabio Segura (LGT Venture Philanthropy) provided insights about the role of social entrepreneurs and impact investors, focusing on their relevance in the Colombian context. He remarked that violence and conflict are not synonyms but two different notions, an important distinction in the context of Colombia. While conflict is inherent to social interaction, violence occurs when conflicts degrade. Fabio Segura suggested that social entrepreneurs could help to end or prevent the manifestation of social challenge or conflict, for instance by modifying lasting social structures and thus tackling the causes of conflicts. In contrast to charity and venture capital, impact investment aims to achieve positive social effects while looking for financial return in an uncertain environment. Challenges in the Colombian context include low organizational capabilities of local partners, poor or no business model design, and the lack of understanding of the change process that goes from the initial resources to the desired effects. To transform societies and optimize their return at the same time, social entrepreneurs need to assess what impact means and how change is created.

Christoph Birkholz (University of St.Gallen) discussed theoretical and methodological concerns regarding research on impact investing and social entrepreneurship. He first explained the limits of the existing research on the subject and the relevance of the latter. He then offered an overview on current theories for managing uncertainty in venture capital, and subsequently presented details on three research projects he is undertaking. In his eyes, new theoretical approaches need to be discussed.

Camilo José Herrera Díaz («Un Litro De Luz Colombia») and Maximilian Schosser (University of St.Gallen/«A Liter of Light Switzerland») presented the solar bottle bulb and their plan of bringing light to 10,000 households in Colombia by 2013. Colombia, Camilo Herrera Díaz explained, lacks a volunteering or NGO tradition, which makes it very difficult to motivate people to participate in projects and serve as multipliers. He emphasized the importance of partnering as well as the necessity of innovation and creation of awareness in the target market. The foundation «Un Litro De Luz» strives to be local and works on the principle of «going viral», i.e. on the idea that project members teach people the techniques so that they can spread it throughout their community.

PD Dr. Heiko Gebauer (EAWAG) suggested that the big, future growth markets will be in the base of the pyramid. While traditional innovation management knows how to create needs in existing markets, we are now facing the opposite scenario: a market must be created where needs already exist. Companies have to link their business to local institutions and other businesses, and think of ways how to integrate customers in the value creation. Up to now, only three businesses have scaled-up in the BOP market: mobile phone, micro-credits, and mobile payment systems. Dr. Gebauer added that entrepreneurs have to understand the need gaps between developing and industrialized countries and at the same time develop a certain dynamics to overcome this bias and to modify its market penetration strategies. Presently, companies are moving away from transnational strategies and are experimenting with what is called «reverse innovation.» Novel products are first launched in newly-industrializing and developing markets. Later, the innovation is brought back to highly-industrialized markets. Such reverse innovation is particularly beneficial for clean tech industries.

Dr. Omid Aschari (University of St.Gallen) made a case for educating business leaders to assume social responsibilities, whereby he focused on SIMagination Challenge, an initiative by St.Gallen's Master program in Strategy and International Management. Corporations create value for human beings, thus explained Omid Aschari, which makes them share a responsibility for the well-being and progress of society. Private corporations have considerable power and are facing manifold societal demands; the universities that educate their leaders have to turn social responsibility into a core element of their parameters of excellence and corporate performance. In this light, SIMagination Challenge was created to encourage students to develop socially responsible projects worldwide. With more than a hundred participants until today and almost 30 completed projects, SIMagination has led to the creation of A Liter of Light Switzerland.

Professor Günter Müller-Stewens (University of St.Gallen) explained the necessity of a new strategy-making tool for social enterprises that is adjusted to their specific context and needs. Private sector tools focus too much on economic performance, whereas the social sector values other aspects higher. A new tool should reflect the pragmatic, multi-dimensional, and participative character of social enterprises, where strategy making is seen as positioning not only towards investors, but also clients, employees, and the public. It is crucial to shape balanced stakeholder relations instead of optimizing the importance of only one player. Strategies should not be developed with a mechanistic approach, and they should take an organization's values into account.

Professor Hans-Joachim Mosler (EAWAG/University of Zurich) highlighted the importance of considering behavior when analyzing innovation diffusion, using cases of toilets and water filters adoption in certain emerging countries to illustrate his points. Behavioral change has to match innovations, he argued, for innovations to ultimately succeed. Prof. Mosler favors systematic approaches to handle the challenges involved. His research has found psychological factors, such as risk, attitude, social norm, ability, and self-regulation, connected with behavior change and adaptation to new technologies. In every specific case, behavior factors must be identified, so to define and design the best techniques for inducing change, periodically evaluating their results. He showed the immense impact that direct qualitative surveys have as a tool for learning from communities. After better understanding people's circumstances, it is easier to promote behavior change for an adequate and faster adoption of innovation.

Dr. Claudia Gafner-Rojas (University of St.Gallen) talked about the relation between domiciliary public utilities, specifically water, and the role that the concept of «social State of law» plays in Colombian legislation after the 1991 Constitution. Colombian constitutional law obliges the State to pursue an active role in guaranteeing fundamental rights, which includes domiciliary public services. This stands in contrast to the fact that access to public services is still not universal in the national territory. Paradoxically, the time when the Colombian State gained these obligations coincides with a rise in the process of privatization. Such a weakening of the State may turn the fulfillment of its duties more difficult. Dr. Garner-Rojas then pondered on the practicality of considering potable water supply as a human right. She believes social entrepreneurs can play a prominent role in increasing public services supply in Colombia, and legislation can properly adapt to their contribution.

Offering an applied case, the chemist **Professor César Pulgarín** (Ecole Polytechnique Fédérale de Lausanne) presented the advances of his research team on processes of water disinfection. In isolated regions, water is often disinfected by chlorination, a method that implies certain problems; alternatives are thus needed. In recent years, the method of Water Solar Disinfection, SODIS, using 1-2-liter plastic bottles, has become an interesting choice. Still, only small quantities of water can be treated by this method, and bacteria are likely to reactivate during subsequent storage. Prof. Pulgarín and his team's objective is to enhance the SODIS process by making it independent from temperature and capable of disinfecting larger quantities of water. His team has found an affordable method that may improve many people's lives. He finished by acknowledging that although scientific research and innovation are crucial to deal with social problems in low-income countries, the managerial strategies and governmental support for scaling up viable initiatives are equally fundamental.

Daniel Ott (EMPA) presented scaling up processes in the recovery of secondary resources in Colombia. A cooperative project between Switzerland and Colombia has been launched to reach a higher degree of secondary-resources recovery and maintain low levels of pollution. Since electronic waste has particular characteristics, it needs special requisites, including bottom up as well as top down strategies. While great progress has been made during the last five years, there is still no real set of regulations or technical recycling standards, nor are there permanent solutions for the disposal or take-back through different channels. He also claimed the need for the implementation of monitoring and control systems, the inclusion of the informal sector and, in general, a focus on education and on changing people's attitudes.

Iván Dario Lobo (Universidad de los Andes) tackled the challenges of subsistence entrepreneurship in the Choco Biogeographic Region, one of the world's most bio-diverse areas, which is, however, very poor in economic terms. With the change in the Constitution of Colombia in 1991, ethnic communities have suddenly become land owners, yet they may neither sell nor rent the land. The underlying issue in this case is how to make innovation, sustainability and scale add up in social entrepreneurship. Aggravating circumstances are the weakness of institutions, the dependence on foreign aid as well as the difficult access to seed capital. Mr. Lobo mentioned the NPO Green Gold Association, which helps develop green and responsible mining going back to traditional mining techniques and which is competing with medium, big-scale and illegal mining. In the closing debate, the question was raised again what kind of entrepreneurship should be promoted in such a setting and how innovation could best integrate traditional forms of social organization without jeopardizing them.

Michaël Tuil (University of St.Gallen) pointed out the difficulties in scaling up a social enterprise due to their high context dependence. While traditional business models are merely profit-oriented and internally focused, social enterprises have an outcome-oriented growth-target and must therefore interact with their «ecosystem,» i.e. with all individual and organizational players relevant to their impact. According to his findings, social enterprises need to concentrate on the theory of change in order to find the scale-up strategy that fits best into a distinct cultural context. There's a wide array of options an enterprise should consider before adopting a particular strategy. Depending on what is being reproduced, e.g. structure, methodology or principles, and on how it is expanded, e.g. by branching, affiliation or dissemination, a company can influence cost control and speed of scaling-up impact.

Former Colombian minister of culture **Paula Marcela Moreno** (Universidad de los Andes/Manos Visibles) focused on the importance of cultural understanding for successful and inclusive development practices. In a country with as diverse a population as Colombia whose national identity is still in flux, a proper handling of cultural differences is key to achieving reconciliation, progress, and unity. Development does not only imply access to physical resources but also community building and people transformation. Many cultural misunderstandings, for instance, are at the center of unsuccessful supply of public utilities, due to the lack of awareness regarding the roots of poor payment habits and regarding the role that certain natural resources play in a specific community. She ended her reflection by showing projects that her NGO «Manos Visibles» is implementing in Colombia. These projects promote integration, community transformation, access to opportunities, and capacity building in urban areas more vulnerable to violence. Such endeavors help to deeply root well-directed development in the Colombian society.