

## **Responsible Business and Sustainable Food – A Regional and International Network Model with Linkage between Science and Business**

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### **Abstract**

Sustainability is a key issue in current research activities and programs. In this conjunction three major functions of research have been identified: Basic research, knowledge reservoirs, and knowledge transfer. With regard to a transmission to the private sector, knowledge transfer is the most important factor. In this process, universities of applied sciences can play an important part as they typically have a long-standing experience in linking science and business in their teaching and research. Another important agent in the process of knowledge transfer are networks and clusters. Their strength lies integrating the different competencies of its partners and using them to a mutual benefit.

The International Centre for Sustainable Development (IZNE) – with a major focus on responsible business and sustainable food – takes the advantage of being part of a University of Applied Sciences (Bonn-Rhein-Sieg, BRSU), and being a member of several regional and international clusters and networks. These co-operations aim to establish and strengthen linkages between science and business, in particular by investigating research needs for business and business relevant research activities. Moreover, IZNE established and expanded regional and international co-operations of its own to get more transparency about regional and international value-added chains in the food sector and the issue of responsible business.

**Keywords:** *Applied and Practice-Oriented Research, Business Sector, Value-Added Chain, Sustainability, Food Safety and Security, Food Process Quality, Spatial Proximity*

### **1 Introduction**

Universities and especially Universities of Applied Sciences are potentially important sources of input for business (innovation) activities (Fritsch, Schwirten, 1999). The key channel through which university research impacts companies is usually basic research i.e. published papers and reports, public conferences and meetings, informal information exchange, and consulting (Cohen et al., 2002). However, input from applied research is also vital. Universities of Applied Sciences with their competencies in practice-oriented teaching and research could build on this and play a special role in knowledge transfer. This happens through educating students, conducting contract research for business or politics or conducting individual company specific workshops/events to initiate research activities. Knowledge transfers which include face-to-face contacts require a geographic proximity of science and business for knowledge generation and exchange between them. Fritsch and Schwirten emphasize that '[I]f spatial proximity is a factor in knowledge diffusion, regional systems of innovation become important as a subject of analysis' (see Fritsch, Schwirten, 1999, Cooke 1996; Cooke et al. 1997). Even earlier Sabel (1989) and Porter (1998) emphasized '[t]he importance of spatial clustering, even in a globalized economy]' (Fritsch, Schwirten, 1999).

The International Centre for Sustainable Development (IZNE) of the Bonn-Rhein-Sieg University of Applied Sciences (BRSU), Germany, is a member of different regional clusters such as Bonn.Realis and Bio Innovation Park Rhineland of the Campus Klein-Altendorf (University of Bonn), but also of international clusters and networks. Moreover, IZNE established and expanded co-operations and networks of its own, e.g. the 'Regional Forum Responsible Business and Sustainable Food' and the 'South-South-North Academic Co-operation with focus on Sustainable Development' together with African universities.

The goal of this paper is to demonstrate the potential of such regional and international clusters and networks in linking science and business in the food sector. For practice-oriented research and projects, Universities of Applied Sciences can play an important role in cooperation with firms and agricultural farms as well as food enterprises such as food processors, distributors and retailers. With the example of IZNE and its focus on responsible business and sustainable food, the following chapters present examples of regional and international clusters and discuss their specific role in strengthening the linkages of science and business.

## 2 Clusters and Networks

### ***Regional Cluster - Bonn.Realis***

Bonn.realis (Bonn Research Alliance of Innovative Information Systems in International Quality Food Chain and Crisis Communication) is a German regional association of scientific entities, businesses and administration in the area of Bonn, Rhein-Sieg and Ahrweiler. The main goal of Bonn.Realis is to increase food safety through innovative concepts and IT-solutions and thereby ensuring the food security of the population. Bonn.realis brings together 45 actors, which represent small-and medium scale enterprises (SMEs), large scale enterprises, public bodies and authorities, universities, research institutions as well as other companies connected with ten existing research and development networks.<sup>1</sup>

### ***Regional Cluster - Bio Innovation Park Rhineland at the Campus Klein-Altendorf (Bonn University)***

The idea of the 'Bio Innovation Park Rhineland' is to create an intercommunal scientific and industrial park close to Bonn with trans-regional importance around the Campus Klein-Altendorf (test fields of the University of Bonn). The role of the park is to bring together a concentrated expertise of green technologies from a large number of innovative research institutions and specialized companies. It is also planned that a 'Bio Innovation Park Rhineland' is integrated in regional, national and international networks. The objective of the park is to interlock science and business, to initiate especially pilot projects and to develop pre-production models and to rent jointly services for park members. The major topics of the park are food, (energy of) renewable raw materials, health, technology and management. Current members of the 'Bio Innovation Park Rhineland' are Jülich Research Centre, University of Bonn, Bonn-Rhein-Sieg University of Applied Sciences as well as regional firms and businesses.

### ***Regional Cluster - Regional Forum for Responsible Business and Sustainable Food***

The forum is a joint initiative of IZNE and the Schmalenbach Institute of Economic Sciences at Cologne University of Applied Sciences. It was launched at the BRSU in July 2013. The forum focusses on responsible business in the food sector. Responsible business means to consider interconnectedness and interdependence of business with social, environmental and economic aspects.<sup>2</sup>

Forum members aim to develop common projects in applied and practice-oriented research and consultancy, cooperating with regional firms especially through three thematic/working groups such as

- Fair Trade
- Safety and Process Quality (social/economic/environmental aspects, animal welfare)
- Public Relations/Networking.

The forum plans next to hold a joint kick-off meeting with further representatives of enterprises and business in the food sector. One goal of this event is to explore business-related issues/questions and current research needs.

### ***International Cluster - South-South-North Cooperation with the Focus on Sustainable Development***

At the international level, IZNE has launched the trilateral scientific cluster 'South-South-North (SSN) Cooperation with the Focus on Sustainable Development' between East and West Africa and Europe. With financial support from DAAD, IZNE was able to carry out a Fact-Finding Mission to Kenya together with its partners from Ghana in November 2013. Partners are the Institute for Development Studies (IDS) at the University of Nairobi (UoN) in Kenya and the Institute for Development Studies (IDS) at the University of Cape Coast (UCC) in Ghana. Apart from the topical issues sustainable technology, renewable energy & energy

<sup>1</sup> Initial members of the cluster were the German Federal Agency for Agriculture and Food (BLE), Chainfood Ltd, German Cooperative and Raiffeisen Confederation (DGRV), European IT Consultancy (EITCO), Trans Border Integrated Quality Assurance (GIQS e.V.), International FoodNetCenter Bonn, Business development unit of the administrative district of Ahrweiler, Rhein-Sieg and City Bonn, United Nations University (UNU), Institute for Environment and Human Security (EHS), Volksbank Bonn Rhein-Sieg eG, Center for Development Research (ZEF) and Bonn-Rhein-Sieg University of Applied Sciences.

<sup>2</sup> Current forum members are DEG Köln, bonn.realis, Akademie für Ethical Business/Institute for German Economic Research (Akademie für Integres Wirtschaften/Institut der Deutschen Wirtschaften (IW)) Cologne, European University of Applied Sciences Brühl (Hochschule EUFH), Cologne University of Applied Sciences, EthNa Competence Center CSR at the University for Applied Sciences Niederrhein, Institute of Safety and Security Research (ISF) at the BRSU, Institute of Detection Technologies (IDF) at the BRSU, University of Bonn (Agricultural Faculty) with the International Centre for Food Chain and Network Research, Cold Chain Management Group of the University of Bonn, GLOBAL G.A.P c/o FoodPlus Köln, Department of Fair and Sustainable Procurement State Chancellery Nordrhein-Westfalia (NRW), SÜDWIND e.V. – Institut für Economy and Ecumenism, Siegburg.

efficiency, social protection and health, entrepreneurship, the main emphasis was placed on responsible business and sustainable food. A research group was created with representatives from all three universities. The linkages between responsible business, smallholders and the challenges for and opportunities in processing and market assessment were intensely discussed between all three partner institutes during the workshop in Nairobi. The follow-up discussion has shown that mutual research interests are family-owned farms and local food production, market assessment as well as an unequal distribution of profits and income. All aspects should be investigated, taking into consideration the essentials of responsible business.

This research and working group has already established linkages with an existing network, namely the 'Regional Forum for Responsible Business and Sustainable Food'. In conjunction with members of the Regional Forum and the SSN research group IZNE organized a panel session on 'Responsible business and sustainable food: Smallholders in the globalizing world' at the 14th General EADI Conference 'Responsible Development in a Polycentric World: Inequality, Citizenship and the Middle Classes', taking place in June 2014, Bonn, Germany.

### **3 Discussion**

One of the functions of public research organizations and universities is to generate new knowledge. Fritsch et al. 2007 distinguishes between three types of knowledge generation: 1. Basic research 2. Knowledge reservoirs, and 3. Knowledge transfer. Knowledge reservoirs are for instance open-access archives, libraries, collections and other facilities. Also, the tacit knowledge of people who work in public research entities is part of a knowledge reservoir. Knowledge transfer is the education of students and academics, who substantially contribute to qualification of the regional labour potential, as well as knowledge influx into the private sector/business. Here the Universities of Applied Sciences play an important role. With their expertise in practice-oriented teaching and research they are able to provide private firms and business with additional research services such as compiling expertise, conducting measurements or placing laboratory equipment at the disposal of customers. It is essential to orientate teaching and research towards the needs of the regional economy (Fritsch et al. 2007).

Knowledge transfer could be reinforced by linking regional and international clusters and networks. For instance, it could be appropriate to extend the 'Regional Forum Responsible Business and Sustainable Food' to partners, firms and businesses of the 'Bio Innovation Park Rhineland' to achieve an explicit involvement of the business sector in the Forum. Potential relevant topics, research needs and the choice of further partners could be jointly discussed and decided upon by firms and businesses. For instance the following themes could be of interest such as consumer survey, firms/enterprises survey, analysis and transparency of entire value-added chains, process quality in terms of social, environmental issues as well as animal welfare, logistics within the value chain. Follow-up measures could be research activities, student thesis, practice-oriented projects and/or events.

### **4 Conclusion**

Regional clusters can play an important role in linking up science and business. Responsible business and sustainable food go beyond regional boundaries and acquire an international character. The IZNE SSN cooperation with East and West African partners could complement and enrich existing regional clusters and networks in the field of sustainable food through joint research and practice-oriented activities, knowledge exchange and events. An initial step is the establishment of a research and working group 'Responsible Business and Sustainable Food', which represents regional and international clusters and networks. Joint conference contributions in 2014 are first visible results of these common efforts.

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