

## Evaluation Historical and Future Transitions in Agriculture and Food (WP-031)

October 2010

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### Problem definition

TransForum aims to promote sustainable development. This often implies 'transitionalizing' existing ways of doing things, across existing value capturing systems, thus organizing a more inclusive capacity to act. How does this happen? Which experiences can be identified?

### Aim

To formulate a perspective on and identify conditions favoring the innovation/transition of existing agricultural regimes, in order to realize a more sustainable agricultural development.

### Set-up

Using notions of Transition Theory, the project researched two sets of transitional trajectories existing of a historical and a contemporary case in the field of horticultural and intensive pig breeding.

### Main findings

While transitions and system changes are usually thought to come about through breakthroughs of technological discontinuities, a closer look at developments in the Dutch agro-system suggests more gradual, stepwise 'reconfigurations' as an important transition trajectory. In this kind of trajectory, innovations are adopted in the existing system, and gradually reconfigure the basic architecture of the existing regime. New combinations of 'old' and 'new' elements gradually change the system in a stepwise fashion.

These type of 'reconfiguration' trajectories deviate from breakthrough transitions in three aspects:

- the process is not driven by *one* major, radical innovation, but by *multiple* (component) innovations;
- these innovations do not compete with the existing system, but are incorporated as add-ons or component replacements within existing supply chains;
- present actors are not swept away by new entrants (as in 'waves of creative destruction'), but survive the process. Hence, the transfer of knowledge and innovations to sitting actors is an important aspect of reconfiguration transitions (ibid.).

In bridging the old and new situation, it is important that different forms and expressions of boundary spanning or *anchorage* (technological, social and institutional) are closely intertwined and logically connected. Innovation processes in one way or another have to create alignments within and between the fields of technological development, the network of involved stakeholders and the wider institutional landscape. Earlier episodes of anchorage create the conditions for later forms and there is the constant challenge to work on the fit between them. Here, there is a crucial initiating role for *hybrid forums/actors* which operate at the intersection between niches and regimes/landscapes. Besides, research points at the importance of increasing normative pressures (to create a sense of urgency and make actors line up in the same direction), and of alignments with or spill overs to economic, regulatory, socio-cultural and technological niche developments.

### Conclusion

The research expresses a warning that one should not be overtly optimistic about the scope for planning and controlling innovation/transition processes. However, this does not render deliberate interventions and projects meaningless, on the contrary. The innovation trajectories implied involve and weave together a wide

variety of networks (including hybrid forums) and developments that are somehow part of (pilot) projects, programmes and interventions. This is in line with both evolutionary understandings of innovation processes and approaches which build on theories about complex dynamic systems. In a context in which it becomes more and more difficult to predict the future in a linear kind of fashion, innovation programmes organize the necessary trial and error spaces. They work as spaces of experimentation and sensibilization, bringing stakeholders together in new configurations around a common awareness, exploring possible directions for change. At the same time, they organise the kind of resources (both in terms of new knowledge, new contacts, venture capital, licensing space) which enable entrepreneurs to explore yet uncertain opportunities, and learn from them.

### **Meaning for TransForum**

During transitions in the making, various developmental paths, with their distinctive platforms of anchorage, may co-exist along and strengthen one other. Hence the future is essentially open. This fundamental uncertainty is important in thinking through innovation/transition programs. They should be organized adaptively, combining a targeted approach (a focus on clear long-term goals) with an openness for exploring different developmental trajectories, thus allowing for both incremental and systemic forms of innovation. Hence one should prevent jumping to conclusions about the systemic implications of innovation programs, allowing the time for step-wise, incremental forms of trajectories to explore uncertain futures and build up learning capacities in hybrid forums.

#### *Implications for MA*

In exploring possible model for MA, one should target at building up a learning by experimentation based approach, allowing for the exploration of a diversity of developmental trajectories, organized around and itself feeding hybrid forums, linking social, technological and institutional worlds.

#### *Implication for connecting values*

The research point out the importance of hybrid actors and of anchorage principles, creating alignments within and between the worlds of technological, social and institutional world.

#### *Implications for the knowledge infrastructure*

There are clear indications in the research for the essential role of the knowledge infrastructure as both a producer of new insights and as a boundary spanning instance. If operating adaptively, allowing for a subtle relationship between exploration and exploitation, the knowledge infrastructure may act as a co-producer of the kind of platforms which allows for the search for new forms of valuecreation/valuecapturing.