Sustainable Rural and Commercial Development (The BNU-Program): Participant Cooperation, Multi-Dimensionality and Learning

Torger Gillebo*

Summary

The experiences from a case study associated with the rural development and commercial research program (the BNU-program) at the Agricultural University of Norway (NLH) from 1995-2001 will be discussed in this paper. Cooperation between three varied regions of Norway was established. The research community had as its goal to contribute to local/regional innovations and thereby developing a better understanding of rural and commercial development (BNU). Included in these goals was a focus on both the realistic challenges met by entrepreneurs, businesses and the local communities as well as the conditions within a given framework.

It became apparent that to be able to carry out both tangible and institutional changes, and at the same time generate new knowledge, is a demanding challenge. There are many pieces that need to fall into place simultaneously for this to be achieved. Nevertheless, the experiences were valuable and new insights that were an outcome of the work have given me food for thought. The main conclusions are that rural and commercial development is a complex area and requires 1) a communicative cooperation among all the participants, 2) an interdisciplinary, case-based research design, and 3) a continuous and learning innovation process.

1. Introduction

I will discuss, retrospectively, some of the approached problems that resulted from my experiences with the rural and commercial research program (the BNU-program) at the Agricultural University of Norway (NLH) from 1995-2001. This essay will include reflections pertaining to what extent local development areas and agricultural research can achieve innovation and revitalization in rural areas.

The main goal of the BNU-program was to generate new knowledge by establishing cooperation with 3 varied regions in Norway. These regions were coastal communities in northern Norway, fjord communities in western Norway, and rural communities located in the mountainous area of eastern Norway.

I will reflect on some aspects that were a result of the cooperation the program had with the 3 specified regions. The research questions are:

1. How should one develop cooperation among all participants to be able to achieve good, innovative processes in Norway's typical agricultural areas? Key terms: instrumental or communicative cooperation among partners involved.
2. How should one design professional advice which pertains to the rural reality that encompasses agricultural production? Key terms: perspectiveness, interdisciplinary and case design.

* Doctoral student at the Agricultural University of Norway.

3. How does one use what has been learned from experience as part of an innovative process? Key words: single-loop learning, double-loop learning, collective learning.

These questions will be addressed in sections 2, 3 and 4. I am making use of a case-design (Yin, 1994) and the method is associated with an essay format using a narrative form (Misher, 1986). Specific individual projects which other researchers were involved in will not be examined in this essay.[1]

My presentation of the experience with the BNU-program should be viewed in light of the fact that I was, at that time, the *coordinator* for the work. I did not have any background as a researcher and, therefore, did not take on the role of a researcher. This did not prevent me from being both a participant and observer in the many professional processes that occurred. It is the *last* role that this essay is based upon.

2. Interaction of local resources and participants

The Steigen Case

Steigen is a coastal and agricultural community located north of Bodø, Norway and to the northwest are the Lofoten Islands. As others before me have experienced, the first impression of the scenery in this region is breathtaking. When I approached the area by sea, we sailed through the skerries which have an almost bewitching atmosphere and docked at Helnessund, a harbour with a long history as being an important fishing centre. My main contact in Steigen headed out to Engeløya with me. This is an extremely fertile island with magnificent cultural landscape and many historical monuments. The island also has beautiful sandy beaches and it was from here that I experienced the midnight sun ”dancing” along the peaks of the Lofoten mountains.

The research director, at that time, from the Agricultural University of Norway (NLH) had previously been in Steigen and had discovered the area’s qualities. On one of our first visits to the area in 1997 she accompanied us. Also joining us during that visit were 2 professors in landscape management and building planning. We were a considerable delegation from the university that now felt that the landscape, the former trading centres and the traditional food and fishing cultures ought to give a BNU investment in this community a very good jumping off point. The idea was to focus on agriculture’s multi-functional role. It seemed obvious that there was potential for tourism and relocation - especially for those people who had moved to work in the city of Bodø.

We arranged two days of discussions and inspections. We met first with those who were in leadership positions both politically and administratively within the municipality; 8-10 people. As is common practice in similar cases, we started off by brainstorming about the challenges and possibilities. On the second day, we wanted to structure and organize the discussions into topics. We were rather surprised, though, when only one of the local people, a consultant in the municipality, showed up that day.

One question troubled me as we headed home. Why did only one local representative show up on the second day of our visit? We were given the explanation that they were each busy with other priorities or that some unexpected events had arisen. Despite this, it still astonished me. It is not every day that a small municipality is visited by a research director and 2 professors from the agricultural university to

[1] A list of all publications dealing with individual projects under the BNU-program is available (unpublished).

discuss a cooperation that would benefit further development within that municipality. Had we seriously misjudged what this local community was actually interested in? Was this an expression of an "informal culture?" Or was there something about our competency that was not adequate for their needs?

After a while I understood more. Employment had gone drastically down in the municipality - especially within coastal fisheries and small-boat production that had traditionally been combined with agriculture. Was it a pure commercial investment and not so much the multi-functional agriculture that they were actually interested in? A few weeks later I decided to head back there for another visit. This time I travelled around with our local contact person and visited professional groups and individual businesses related to agriculture and fishing. We met with the National Farmers' Union, the Small Farmers' Union, the Farm Womens' Union and the local agriculture research and extension group. A list of possibilities having to do with grazing, animal and plant production were touched upon as well as the potential for the local dairy. In addition, I had conversations with the head of fisheries in that area, some fishermen, fish-processing plants (fillet-production), smolt (young salmon) production and a fishing-net mending industry.

Back at the university I contacted some of our aquaculture researchers who subsequently travelled to Steigen. One of these introduced a joint project with several of the smolt and fishing-net mending companies. Later, the dean of the university joined in and spoke with the northern division of Tine (Norway's Dairy Cooperative) and the substantial fish-farming business Follalaks about a possible cooperation. An idea was finalized in the form of a food-processing centre working together with the dairy and a new salmon-processing plant in the municipality.

Now things were starting to happen in the aforementioned aquaculture businesses and the plans for food-processing were also set into motion. In an evaluation of the BNU-program, the contact people in Steigen were very pleased with the researchers who they had been in contact with. We were able to notice the beginnings of good communication and mutual trust. After a while an important criticism surfaced: the expectations were clearly greater than those that had been fulfilled. Partly to blame were the lack of financial interest from SND[2] and others, and a lack of follow-up from the research community at the Agricultural University of Norway. Despite all the activities set into motion and several professional, inspirational meetings, we agreed with this evaluation. All of us had higher expectations than those that had actually been fulfilled. I noted the following factors that had to do with the different participants in this case:

- The municipality had not formulated any strategic commercial plan of its own. In the BNU-program, we emphasize those local municipalities that want commercial development must take on the developer role themselves by drawing up such a plan. Moreover, there was an ongoing joint project in rural development that Steigen was not a part of. The county of Nordland, which Steigen is situated in, was more than willing to be represented in a local planning group within the BNU program.

- It was truly a boost for our research to have the university's research director and 2 professors make the aforementioned trip to Steigen. This was also true when the dean visited the area at a later date. Because of this there was a meaningful exchange at a higher level between leaders from the university and those in leadership positions in Steigen. The role of the individual researcher then was to disseminate information and put research into use rather than developing new research. During the visit the dean expressed the following:

[2] The Norwegian Industrial and Regional Development Fund.

"After working some time with rural and commercial development (BNU), many researchers will find that they have not had the chance to publish as many articles in recognized scientific journals as other colleagues, or should we say competitors, who adhere to the guidelines within discipline-oriented research. For younger researchers this will result in a weaker basis for merit in the research community."

Instrumental participant cooperation

Based on the experiences from the Steigen-case, the relationship between the participant's involved and local resources can be represented by figure 1.

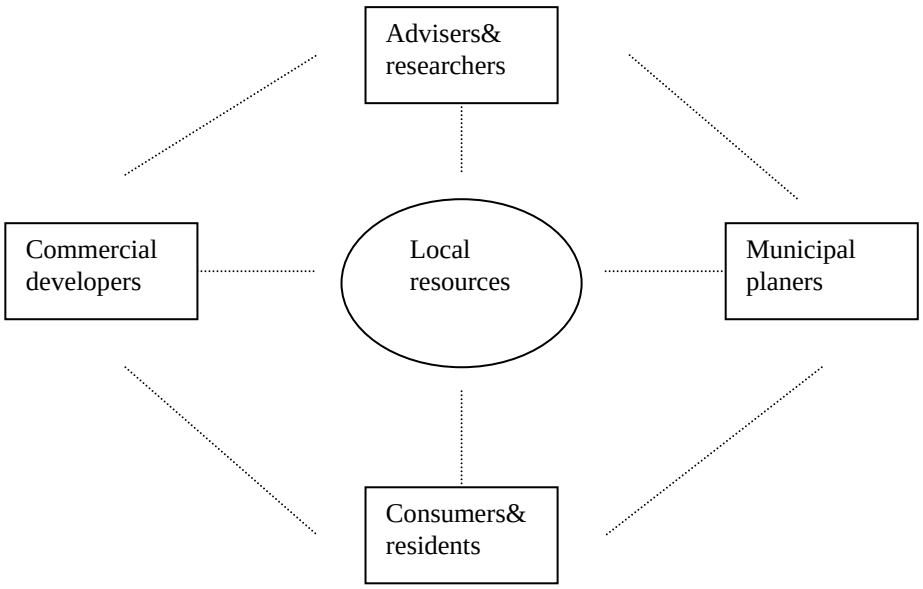

Figure 1: Local resources and instrumental participant cooperation

The figure illustrates that many participants are involved in the use and management of local resources. This challenge creates a contact and a flow of information between the participants involved. The contact has, however, an instrumental character to it. Within the context of BNU it was regarded as sufficient to establish an intentional agreement, a coordinator was hired centrally and locally, and that there were some capital resources to draw upon. One counts on that there is adequate incentive so that all the participants will respond to the initiative and begin the necessary activities. In the proper sense one would base this on well-rooted organizational theories; for example those discussed by Morgan (1997).

For a planned project that goes across traditional organizational borders, the aforementioned approach is insufficient. At the same time, though, the rural areas and in particular rural commercial interests are woven together into larger and nationally encompassing organizational systems. With that in mind, the institutional perspective becomes more relevant, something in practical terms has not gotten the attention it deserves in the BNU-program. Berger and Luckmann (1997) emphasize that there exists a collective reality in the sense that individuals, or groups of people, partially form and are formed by society's surroundings. Some systems are so efficient that even though they are the result of the activities of many individuals, appear as an "objective reality." An example of this is the dairy industry in Norway which has been a monopoly for 70 years. This fact was made clear to us as we discussed the dairy in Steigen which is being threatened to be shut down. Both locally and regionally it was felt that our chances here were almost zero.

Communicative participant cooperation

A one-sided focus on strong market stakeholders will, however, be a barrier that will prevent the individual or local society from being innovative. Even the most stream-lined organizations are not so rational that they are not susceptible to influence. Brunnson (1994) suggests, on the contrary, that it makes itself evident in a list of inconsistencies *internally* in organizations as well as *between* organizations and their surroundings. Many well-organized food distribution companies can, under certain conditions, see the value of cooperation between local producers and consumer groups, regional authorities and research (Murdoch, 2000).

Murdoch also states that rural development, in addition to finding its place in the *vertical* food chain that was touched upon above, is also dependent on building a *horizontal* network. This implies that a democratic, cohesive forum consists of active participants as well as a commitment and competency among local residents, as the basis of a joint effort. The experience from Steigen made us question whether the participants, especially those of us with a research background, had the insight to understand that it was clearly necessary to invest substantial amounts of time and resources.

In this context, I feel that the following illustration, figure 2, is more appropriate and effective than figure 1.

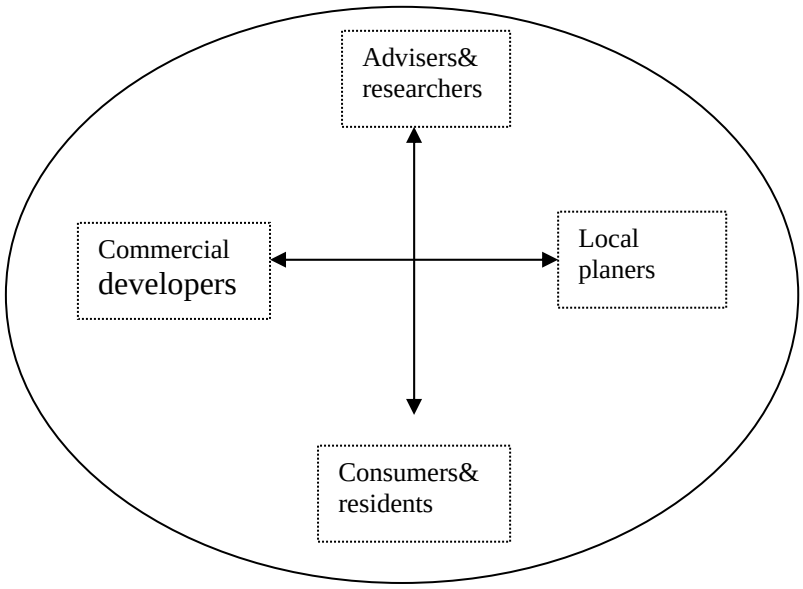

Figure 2 Local resources and a communicative participant cooperation

In figure 2, local resources take on the role as a common denominator for the different participants involved, not as a confined entity as seen in figure 1. The different participants, including advisers and researchers, have now managed to come ”inside” of the reality that rural communities find themselves in. In addition, the squares around the different participants are dotted and the arrows between are solid which is in contrast to what figure 1 shows. This figure illustrates a situation where *interactive cooperation has been achieved*.

Steigen wanted some participants that carried weight within the development process. At the same time, though, their “style” was direct communication, personal contact, mutual trust and action. This was in line with their informal and hospitable culture. There is a lesson to be learned here for both regional authorities and researchers. First closeness, respect and trust then formalized plans and binding

cooperation agreements which are a result of this. Therefore such plans will be less likely to be ”dead” but instead more alive and action-oriented.

3. Rural communities are both complex and unique

The Varaldsøy Case

In the summer of 1998 I arrived in Øyarhamn on the island of Varaldsøy. With me on this trip were several researchers, politicians and rural developers. The island of Varaldsøy is in the Hardanger Fjord in western Norway. This visit was part of a follow-up to a cooperation we had with the municipality of Kvinnherad regarding a development plan for Varaldsøy.

We made one stop at a farm owned and runned by Haktor. In addition to being active in local politics he is also an enterprising farmer who has invested in cabin building for vacationers and tourism. Haktor was an example of a resident who was both an entrepreneur and willing to invest in the community. He could see what qualities and potential this island has. We viewed some very important environmental sites such as former pastureland rich in a flora of grass and herbs, stone walls, old abandoned barns and houses Haktor mentioned that agriculture in the area was on the decline and that second growth was a danger to the cultural landscape. He also informed us that the population in the area was also in decline but felt that this trend could be turned around. The first step, he felt, was to change the environmental authorities' philosophy of ”from the top on down” decisions which he meant reeks of mistrust of local democratic ideals and inhibits commercial development. In its place he saw the significance of a more environmentally based agriculture which could preserve the special environmental qualities of the island. He was engaged in continuing to develop agricultural tourism tailored to a public wanting to live and work on an actual farm.

During our visit to the island, we took part in some rather lively conversations with the local representatives and the researchers from the agricultural university. Spirits were very high! Those of us from the university returned to our departments and quickly decided to put together a project proposal. We narrowed the topic to ”alternative rural residences” and decided to concentrate on the following areas[3]:

- Rural residential planning that reflect the local building tradition (including traditional courtyards)
- Waste management and recycling programs
- Site planning and community planning
- Investigate residential and living preferences.

Our aim was to organize this in such a way that researchers from several different fields would be able to establish a cooperation with some selected rural development areas; in this case - Varaldsøy. We recommended doing this as a case study. Since we did not want to base the work on an already defined interdisciplinary model, it seemed natural to utilize an explorative approach. Local conditions would shape the terms of the research work.

The proposal was sent for approval to 3 institutes at the university. Two were positive to continue working on these ideas while the third institute was negative to the idea. The head of this institute wrote the following memo to us:

[3] Lunde, E.M., 1999: (In Norwegian: Organizing alternative living situations in rural areas. BNU-report 2/99).

"The report provides a straight-forward review of several relevant topics with regard to rural residential planning. It is to some extent characterized by normative understandings that it is wonderful to live in the countryside, which ought to be played down a bit. Those asking and researching the questions could have expressed themselves more clearly by providing more precise ways of looking at the problem. The question arises whether the Agriculture University of Norway should use a significant part of its staff on development and consultant work as this report seems to suggest. The report, as it stands today, provides a weak basis for systematic research."

This was not easy to decipher. To be able to more precise when "asking and researching the questions" harmonizes well with a case design. The same applies for the warning about too much "consultant work." In reality, case research is more a building up of new knowledge rather than selling knowledge. On the other hand, "normative understandings," using more "precise ways of looking at the problem" and "systematic research" were being warned against. I had great difficulty in understanding that it was even possible to begin with very clear ways of looking at the problem at hand. Was not that in itself part of the research question to be answered? What is actually the problem to be addressed? Given the complex circumstances on the island of Varaldsøy, we were not able to define these in advance.

Objections were so strong that we decided to terminate the process already begun. However, another possibility arose when two researchers and 20 students took it upon themselves to create a "plan for the coastal and outlying areas of Varaldsøy." They carried out interviews, conversations and took part in local meetings and created a very professional report which included descriptions of resources, conflict areas, commercial development possibilities and planning needs.[4] This plan gave a much-needed basis for further work on the island.

Perspectiveness

The above account illustrates that when one is working in a rural and commercial development context, one can meet many different aspects, ideas, and research questions to be addressed. On Varaldsøy, one was concerned with the vast richness of resources on the island and the possibilities for a multi-functional agricultural development. The local residents and their spokespeople wanted external support, including that from the Agriculture University of Norway, to be able to have a firm grip on innovation and revitalization of the island.

The big question to ask would be "What would a sustainable agriculture and a sustainable development for Varaldsøy in its entirety consist of?" Based on discussions with different people in the area, it was not possible to form one clear understanding to this question. This corresponds to accounts made by Pretty (1995) who points out that there is no precise and absolute definition of the concept. It becomes necessary to put things into perspective, as much as possible, and be willing to adjust one's understanding of what is sustainable through a continuous learning process (Ljung, 2001). Did the statement about alternative residential possibilities, for example, take this into consideration? Was one in this particular instance, adequately inquisitive and searching, as the head of the institute was interested in?

[4] Edvarsen, M., 1999: (In Norwegian: Coastal and outlying area plans for Varaldsøy. BNU-report 1/99).

Interdisciplinary approach

The 4 subtopics that were addressed in the report about alternative residence possibilities proved to be both exciting and relevant. At the same time, though, it became clear to us that we were dealing with 4 distinct topics. The topics were not to be addressed based on a stringent model of professional integration. I had a very clear understanding about this, but instead chose to emphasize that trying this out should occur in parallel with each other and in the same geographic areas.

It was hoped that the process would further develop professional integration. Experience shows, however, that an interdisciplinary approach must be more than just a cliché of words if there is to be any value in it. It is advantageous in this case to distinguish between two terms (MacNaill, undated)

1) Multi-disciplinary approach. This can occur in reality when one takes advantage of several professional areas to solve different problems. For example, this can be used in a business or in a municipality but in such a way that the professional disciplines operate autonomously.
2) Interdisciplinary approach. In this case, knowledge is generated with concise, discipline-dominating terminology and will affect and change existing disciplines and theoretical structures.

Will a case-design be a good route to follow to be able to develop a genuine interdisciplinary cooperation?

Case-design

The institute head, as mentioned earlier, warned against ”normative understandings.” He had every right to say this since so much research is done in the name of objectivity, but which is actually based on clear assumptions and understandings of real situations. The problem arises, however, when such assumptions and presumed understandings are not explicit. When this does not occur, it becomes difficult to carry out trials afterwards and be able to verify or repeat the research results.

With regard to Yin (1994) the challenges in a place like Varaldsøy do not allow, first and foremost, themselves to be solved by simply counting sheep, types of trees, types of landscapes etc. and study eventual connections between these (survey analysis). The challenges are neither solved alone by, for example, changing a property border, testing a new building construction or similar experiments. Since what is important here is the interplay between nature, technology and people, it is essential that researchers also have an insight in the unique local culture and its thought processes. Stonehouse (2003) points out the following:
“Substainability necessarily deals with a complex blend of issues from the hard sciences (biological and medical), semi-hard sciences (environmental and ecological) and the soft sciences (economic, sociological, political and animal welfare). The case-study approach allows for differences as it progresses toward compromise solutions. It is holistic and integrative in concept and scope. It permits more than one “right” answer.”

Through the BNU-program I have experienced completely the truth in the statement that ”communities have problems, universities have departments”[5]. The holistic approach which Varaldsøy attracts, is felt by agricultural research to be lacking the necessary tools to deal with it. Experience with the BNU-

[5] OECD, 1992.

program is not unique or different from experiences with other comparable programs. In an evaluation of a national program to improve the interplay between local commercial interests and R&D-institutions (also called SMB competency), it was revealed that experiences were rather mixed. In particular it was pointed out that a "cultural gap exists between the business world, in particular small and medium-sized companies, and the institutions of higher learning" (Gammelsæter, 2000). Schön (1983) uses the term "technical rationality" as an expression for the gap between research and reality that the positivistic technological research from the last century carried forth. He maintains that convergent knowledge which is not in harmony with a divergent reality is a highly, amputated knowledge. The Varaldsøy-case seems to confirm this opinion.

4. Regions and research that provide learning

The Mountain Region case

Towards the end of the BNU-program period, many of us at different levels, began to acknowledge that the work could not continue in its fragmented state. In the program's third case study, the Mountain Region of Østerdalen, several exciting sub-projects were completed. In the final phase the Council for Mountain Regions made clear the interest in a:
"Pilot program for innovation in agriculture and food processing in the Mountain Region of Norway" and that "with the experience from the BNU-program we hope to have a deeper future cooperation with the agricultural university where we have joined the development projects into a more thorough program."

The council further stated:
"It is difficult to put researchers' individual interests into effect in a cohesive rural development. Fragmented contributions become weak without being able to take into consideration the deeper connections and the complex conditions that exist in the relationship between rural development and commercial development. From the point of view of the Mountain Region, we believe, therefore, that BNU should to a greater extent put individual professional interest in a more comprehensive context whereby a research program is directly linked to a development program for an area"[6]

In similar fashion, NLH - the Agriculture University of Norway – admitted the following:
"In the upcoming strategic planning period, the university will have as a priority to develop interdisciplinary cooperation as unique quality about our university" and there shall "be established organizational structures and systems for resource allocation that are adaptable to interdisciplinary forms of cooperation and programs"[7].

These admissions form a very good starting point for a new phase 2 - both "partners" now realized the need to address the issue in a deeper, more determined way. As many were expecting a new, positive resolution from the university's board of directors, to their surprise came the following announcement: The BNU-program was to be permanently discontinued and in its place the board presented a rather cryptic message about adapting to a "thematic investment in added value." Instead of intensifying and completing cooperation with the involved municipalities - as had been agreed upon, all contact was now

[6] (In Norwegian: Regional council for the mountain region of Norway, 2000. Letter dated 20 June 2000 to the Agricultural University of Norway).

[7] (In Norwegian: Strategic plan for the Agricultural University of Norway, 1999-2004. A strategy for changes and quality development.

to be terminated. Therefore, it was no longer possible to build upon what had thus far been learned and to further cooperation with all the current participants.[8]

Single-loop and double-loop learning

The change in focus from traditional agricultural practices to one of rural development and growth for small and medium-sized local businesses represented a substantial new change in orientation. This requires new competency and an even better understanding of what is, at several levels, of value and affects municipalities and agricultural organizations as well as the research communities.

Argyris and Schön (1996) point out that such changes in processes very often cause difficulties because the established partners have a tendency to want to keep the status quo. The author's use the term "single-loop learning" about situations where one partner initiates a series of changes to better a situation that is felt is non-optimal. In reality this means an adjustment of profile or image in the activity, for example, project deadlines. This will usually not have any "disruptive" effect on the guiding values and on-going activities. In the event that the latter is true, then Argyris and Schön (1996) feel that double-loop learning i.e. one is open-minded towards new, often strange, ideas and that one is willing to orient central parts of one's business towards new goals and values.

Collective learning

Cooperation between rural areas and research where the goal is a lasting readjustment and renewal can only be a mutual learning process. Many projects and activities often can be put into effect, but will be fragmented and undynamic in form which is in line with the concept of single-loop learning. The request from the Mountain Region for collaboration with the research environments indicated openness for new impulses and new knowledge in a way not previously characteristic of Norwegian agricultural districts. The potential for double-loop learning, yes, "regional learning", was apparent.

The Agricultural University of Norway wanted to strengthen its competency in relation to the rural area's need for readjustment. The following question arises: can this exclusively occur through transfer of the already existing knowledge, or is it necessary for up-dated knowledge? The experience from the Mountain Region was clearly that the "individual researcher's interests" seemed to strongly steer the contribution from the research milieu. This must not be misunderstood, though. Individual researchers with drive are needed, but these should be given guidelines so that this "drive" is of use for the common good. Only then will the "silent knowledge" and the researcher's knowledge become supplementary to each other.

The exit of the BNU-program and the circumstances around it, indicate that the agricultural research community has a long way to go with regard to "learn to learn", or in other words, carry out "learning research".

[8] Ethical implications of such an approach is a different aspect that is not addressed here.

Closing comments

In Steigen, one was preoccupied with new employment possibilities. On the island of Varaldsøy, the focus was primarily on the area's residential qualities. In the mountain region one saw many new possibilities of developing good, regional institutional arrangements. Rural and commercial development (BNU) is a many-faceted field. It is necessary for time to allow for a greater integration between knowledge and reality, and between knowledge and taking action. The road to knowledge *about* BNU goes via knowledge *in* BNU.

References

Argyris, C. and Schön, D.A, 1996: Organizational Learning II. Theory, Method and Practice. Addision-Wesley, New York.

Berger, P.L. and Luckmann, T., 1997: The Social Construction of Reality. Penguin, Harmonsworth.

Brunnson, O.J., 1989: The organizations of Hypocricy Talk, decisions and actions in Organizations. John Wiley and Sons, New York.

Gammelsæter, H. m.fl., 2000: Bedriftsutvikling eller stimulering av innovasjonsmiljø? Midtveisevaluering av SMB-kompetanse. Rapport 0002, Møreforskning, Molde.

Ljung, M., 2001: Collaborate Learning for Sustainable Development of Agri-Food Systems. Doctoral thesis. Swedish University of Agricultural Sciences, Uppsala.

McNeill, D., undated: On Interdisciplinary Research: with particular reference to the field of environment and development. Stencil. University of Oslo.

Misher, E., 1986: Research interviewing. Cambridge: MA Harvard University Press.

Morgan, G., 1997: Images of Organization. Sage, Newbury Hill.

Murdoch, J., 2000: Networks – a new paradigm of rural development? Journal of Rural Studies, 16.

Pretty, J.N., 1995: Participatory Learning For Sustainable Agriculture. World Development. Vol 23, No 8.

Schön, D.A., 1983: The reflective Practitioner. How professionals think in action. Basic Books, UK.

Stonehouse, D.P., 2003: A holistic systems approach to addressing sustainability issues in the agri-food sector. The Journal of Agricultural Education and Extension. Vol. 9.

Yin, R.K., 1994: Case Study Research. Design and Methods. Sage.