

On the way to sustainability through social learning

An action research approach to 4H farms in Sweden

Frida Samuelsson

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A thesis submitted in partial fulfillment of the requirements of Lund University
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Submitted May 18, 2013

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Abstract

The world is facing complex sustainability challenges, and the quest for a more sustainable world is characterized by uncertainty, both regarding goals and means. It is argued that this uncertainty requires a social learning process, where people collectively find shared problem perception and directions for sustainable solutions. The Swedish 4H farms have a great potential of being a platform for sustainability. Still, many farms are facing challenges and uncertainty about the future, and there is increasing awareness about the need for change. Hence, this project seeks to understand how social learning can be relevant in assuring sustainability at Swedish 4H farms, in theory and practice. Action research is used, to allow for facilitation of change and the co-creation of knowledge with participants in six research cycles mainly consisting of interviews and focus groups. In this approach, the organisation of 4H is seen as a system that lives within the larger social and ecological systems.

Research outcomes show how 4H farms are facing sustainability challenges. It identifies a lack of communication between different parts of the organisation system as well as with the surrounding society. This results in a lack of knowledge transfer and critical reflection about sustainability. Lacking resources is seen as an immediate threat, partly stemming from there lacking an efficient system of institutional coordination. 4H is lagging behind in environmental issues, which can be traced back to the history of not taking stand in political issues and having opposing farming paradigms present in the organisation. The study identifies a possibility of 4H farms to be simultaneously viable and to be an important actor in the transition to a more sustainable world through a process of social learning. Also there is the need to find a shared identity and vision that responds to societal changes, one that integrates the environmental, social, economical and political perspectives of farming. Last, as befits an action research project, outcomes of this study include a reframing of 4H identity and an increased awareness, reflection and learning about sustainability, with 4H taking ownership of the process. Additionally, negotiations about a new farm and the start of an urban farming project have sprung out of the process.

Keywords: 4H Farms, City Farms, Sustainability Science, Social Learning, Action Research.

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1. Introduction

The United Nations environment agency (UNEP) warns that the world continues to speed down an unsustainable path, in spite of internationally agreed goals to support the sustainable management of environment and human well-being (UNEP, 2012). Ever-growing human demand for resources is putting vast pressures on biodiversity, which threatens earth's capacity to provide the ecosystem services that human well-being depend upon (Millennium Ecosystem Assessment, 2005; WWF, 2010). Humanity is facing complex sustainability challenges such as rapid environmental change, a warming climate, biodiversity loss, and land transformation together with social issues regarding for example population growth, income inequality, and increasing consumption (Kates & Parris, 2003).

The field of sustainability science aims to address these complex sustainability challenges and meeting human needs while preserving the life support systems of the earth (R. Kates et al., 2001; WCED, 1987). It takes a systems perspective looking at the dynamic interactions between human and environmental systems, connecting the local and the global, north and south. Sustainability science acknowledge the fact that in order to solve sustainability challenges, there has to be a problem-driven approach with the goal of linking knowledge to action for sustainable development. The nature of these sustainability challenges seems to be such that a routine problem-solving approach falls short (Wals, 2007). Rotmans (2005:20) argue that in a transition towards sustainability, "neither the definition of a problem nor the direction of the solution is unequivocally known a priori". This points to the high level of uncertainty in the search for a more sustainable world, both regarding the goal and the way to get there (Wals, et al., 2009). It has been argued that this uncertainty requires a joint process where people collectively find shared problem perception and directions for meaningful and feasible sustainable solutions (Rotmans, 2005; Wals et al., 2009). This process has been called social learning.

The concept of social learning has been embraced by fields such as natural resource management and environmental education, as a way to achieve social change (Lotz-Sisitka, 2012; Reed et al., 2010). It has also developed in the organizational sphere, where it's seen as critical for achieving sustainable organisations (e.g. Antonacopoulou & Chiva, 2005; Eikeland, 2012; Fenwick, 2007).

One organisation that is interesting to look at with the eyes of social learning for sustainability is 4H (Head, Heart, Hands, Health) farms. These educational city farms belong to the larger organisation of 4H, which is an international youth organisation with activities

ranging from animals and cultivation to sports and drama. Swedish 4H have around 12 000 members in 200 clubs. Around 40 of the clubs have a 4H farm, where children and youth can take part in managing the farm in line with the motto *learning by doing* (Johansson, personal communication, 2013; Riksförbundet Sveriges 4H, n.d.-a, n.d.-b). 4H has a great potential of promoting social and ecological sustainability through educating children and youth about our relationship with nature and food production, moreover within a context in which urbanization continues to increase. It's worth noticing that at the moment, Sweden is the country with the most rapid urbanization in the European Union (Magnusson, 2012). Moreover, research shows that children of today spend less time in nature and the overall knowledge of where food comes from is steadily deteriorating among students and teachers (Frid, personal communication, 2012; Mårtensson et al., 2011).

While societal needs for the benefits of 4H farms seem promising, the farms are experiencing considerable difficulties. With decreasing members, many farms are facing financial cut downs from municipalities, which might threaten their existence. Furthermore, a study by Sandell & Sörlin (1994) showed that the organisation was lagging behind the environmental debate, which still seem to be the case, particularly when compared with similar institutions in Europe. According to the European Federation of City Farms, sustainability has a high priority on city farms with different environmental issues on the agenda such as environmental education, organic management of land and empowering people to improve their own lives and environment (EFCEF, n.d.). Such contrast further accentuates the need to understand what is happening with Swedish 4H farms. While 4H is facing challenges, there is also an increasing internal awareness about the need for discussion about the future of the organisation. In this setting, social learning becomes interesting as a process of collective problem awareness and problem solving.

After many active years as a 4H member, I have started to realise the great potential of 4H farms as an educational platform for sustainability. As I had recently started the LUMES programme, I was faced with the news that Oxie 4H farm in Malmö had to close down because of lack of municipal funding. At the same time, I met a person who explained to me that her dream was to start a farm, where children could take care of animals, learn about food and sustainability. She did not know about 4H. With my new knowledge in sustainability issues, multiple questions were provoked: How come this person is unfamiliar with 4H, even though she is interested in the topics of the organisation? Why does the city of Malmö, who promotes itself as world leading in sustainability, cut funding for a 4H farm? And what is actually the situation of sustainability at the 4H farms? I saw a window of opportunity and

contacted the national board to suggest the start of a project about 4H farms and sustainability. This came to be the beginning of this research.

I use an action research approach, as I want to create change and transformation of 4H. Furthermore action research has the ability to help us “solve complex problems in unknown situations during times of rapid change.” (Zuber-Skerritt, 2001:24). This approach fits well both with the aims of sustainability science and social learning: all three strive for *change* for a better world, acknowledge that the *complexity* of problems and *uncertainty* how to get there demands *participation* from of a *diverse* range of stakeholders to *reflect* and *learn* together and come up with solutions that are *applicable* to *real life problems*. Furthermore, they adapt a *systems perspective* that allows understanding systems of communities in terms of relations and connections. This is what I want to bind together in the case of 4H farms.

In this approach the organisation of 4H is seen as a system that lives within the larger social and ecological systems. Consequently it becomes relevant to look at the system as a whole and take into account the relations and connections between the parts as well as with the system’s environment (Wals et al., 2009). The importance of interaction with the environment can be found in a study by Arie De Geus, (Capra, 2002) who concluded that long-lived companies are those that resemble living entities, firstly having a strong sense of community and collective identity around a set of common values; and secondly, being open to the outside world, having tolerance for the entry of new individuals and ideas, and consequently learn and adapt to new circumstances. Healthy systems are learning systems, meaning that people “learn *from* and *with* one another and collectively become more capable of withstanding setbacks and dealing with insecurity, complexity and risk” and social learning is a way to arrive at such learning systems. (Wals et al., 2009:8). In view of this conceptualization, I define the sustainability of 4H as the ability of the organisation to maintain viable (micro sustainability) at the same time as contributing to social and ecological systems (macro sustainability). This definition was constructed from reading and from the input of the organisation. In my approach, what constitutes «the contribution to a social and ecological system» cannot be a pre-defined, static, objective given. Because it includes a normative framing, what macro-sustainability *is* should not be pre-determined by the researcher alone. It’s in fact part of the social learning process: a matter being raised to collective awareness, discussion and implementation. As a starting point, however, macro sustainability was defined from the perspective of the organisation itself, namely through their explicit policies relating to sustainability (see section 2.2).

My research focuses mainly on 4H farms, rather than the whole organisation of 4H. This might be a limitation from the viewpoint of my colleagues in 4H but from a research point of view it is an important choice in terms of scope and focus. Apart from the potential of farms being a sustainability platform, the farms also give the possibility to develop a “concept” as they often have employees already teaching about farming and animals. However, as farms are only part of the system, the whole organisation is incorporated to some degree in order to create a holistic understanding.

By conducting this research I want to contribute to assuring sustainability at Swedish 4H farms in this dual meaning of sustainability. Also, owing to a lack of academic research about Swedish 4H I hope to contribute to the co-production of knowledge about the organisation, both in theory and practice. Furthermore, I seek to contribute to a growing body of knowledge that integrates social learning and action research within the field of sustainability science.

1.1 Aim and research question

Kurt Lewin, often referred to as the originator of action research, challenged the borders separating theory, research and action, stating: “no action without research; no research without action” (Adelman, 1993:8). The methodology therefore creates a synergy between its action oriented aim - to bring about change in an organisation and its research purpose - to increase understanding on the organization and the research process, (Dick, 1993) In this thesis the research aim is to assess how social learning can be relevant in assuring sustainability at Swedish 4H farms and the action aim is to facilitate a process of social learning about sustainability at 4H farms. This leads me to the following research question:

- How can social learning be relevant (in theory and practice) in assuring sustainability in 4H farms in Sweden?
 - What are the factors that block and facilitate social learning?

1.2 Outline of the report

The report begins in chapter 2 with a background about 4H and its history in relation to environmental issues in Sweden during the 20th century. This broad historical context is crucial to grasp the whole of a system as present patterns and behaviours often have evolved from the unique history of a particular organization, its periods of exceptional performance, its prior leaders, etc. (Susman & Evered, 1978). Chapter 3 will provide the reader with a theoretical framework on social learning and chapter 4 substantiates the choice of action

research as a methodology. Chapter 5 presents the results and analysis as a process based on the action research cycles, as suggested by McNiff, et al. (1996) and chapter 6 summarises and analyses the results in three themes. Finally, chapter 7 presents conclusions and recommendations for further action and chapter 8 presents reflections about my role as a sustainability researcher and my personal learning outcomes.

2. Background

2.1 The history of 4H

The history of 4H started more than a century ago, in the United States. In the end of the 1800s, researchers saw that adults in farming communities were not adopting the new farming techniques developed at the university. Youth on the contrary were interested in new ideas and willing to share them with their parents. This, together with the desire of public schools to become more connected to country life was the starting point of a rural youth programme with a practical and “hands-on” learning approach. In the early 1900s the first club was established that came to be the start of 4H. The idea spread all over the United States and eventually all over the world, today being represented in more than 80 countries (National 4-H Council, n.d.).

4H in Sweden has its historical roots in the Agriculture-Youth Association (Jordbrukare-Ungdomens Förbund - JUF), which started in 1918. The 4H programme was introduced in 1924 and was first called “Young cultivators” and later adopted the name 4H clubs. The target group was young people in rural areas. By the end of the 50’s the 4H clubs outnumbered the young farmers clubs and 1960-61 the organisation of Swedish 4H was born. 4H got its independence status in 1979 but still with a co-operation with Agriculturer-Youth Association and the Union of Forest and Youth (Förbundet Skog och Ungdom – FSU)(Riksförbundet Sveriges 4H, n.d.-a, n.d.-b).

The overall, initial goal of the 4H movement (that is, the different associations that came to be 4H) was to create an interest and care for the homestead, increasing knowledge of the factors affecting crop performance, raising the helpfulness and solidarity and counter urbanization in favour of the development of agricultural activity (Sandell & Sörlin, 1994). With the introduction of the 4H programme, the movement eventually adapted the 4H emblem which is the four clover with the 4H:s, with the original meaning of *Head* trained to think, plan and reason; *heart* trained to be true, kind and sympathetic; *hands* trained to be useful, helpful and

skillful; and *health* trained to enjoy life, resist disease and work efficiently (National 4-H History Preservation Program, 2012, n.d.).

The 4H farms were initiated in the late 60's, as the number of young people in rural areas was decreasing and there was a debate in Swedish 4H whether to start activities in urban areas. The idea to start farms in the cities came up and the name "4H farms" was later chosen, in order to promote the 4H idea and programme. The 4H farms activities ranged from animal husbandry, gardening, forest, environment, nature, home and household, handicrafts, culture and 4H entrepreneurship projects (Jansson, 1993).

2.2 4H and its relation to nature

Sandell & Sörlin (1994) has carried out studies on three Swedish youth organizations oriented towards nature and outdoor recreation: the Swedish Scout and Guide Association, the Swedish Society for the Conservation of Nature (Friluftsförbundet) and the 4H movement. These three organisations are considered important for the development of outdoor life in Sweden during the 20th century. Throughout the century, parallel with the emergence of modern welfare society, the idea of outdoor life and nature contact has been used for various educational purposes. "The Swedish nature" and "nature-loving Swedish people" have been important rhetorical agents in efforts to build the modern Swedish nation. In the beginning of the 20th century the rapid industrialization and urbanization process acted as background to a great interest in physical recreation. With increased material wealth, the gradual reduction of working hours and holiday legislation (from 1938), it became possible for the general public to have free time. In parallel, tourism, recreation and outdoor activities were established as key economic, regional and professional areas of interest. Outdoor life can thus be understood as both a consequence of and a reaction against the industrialized and urbanized society (Sandell & Sörlin, 1994).

Three common themes among the organisations stand out regarding the use of outdoor life as a means to an end at the beginning of the 20th century: for national identity, for the promotion of physical and psychic health; and to counteract the negative effects of urban life (Sandell & Sörlin, 1994). These themes will be discussed below.

In the rapidly changing society of the early 20th century, a concern for the social fosterage of youth grew among the elite. The outdoor life would on the one hand, "raise the rootless youth" to a healthy life and on the other hand, foster the feelings of national community when rural communities decreased on account of growing urbanization. The outdoor life oriented

youth organisations can be understood as one out of many initiatives to establish national identity during this time, as a response to the threatening international community that was associated with socialism and the labour movement (Sandell & Sörlin, 1994). One characteristic of the Swedish nation building was the central role that was attributed to nature, as a productive resource, as a public resource and as a national symbol in art and literature (Ibid). In this historical analysis, it's noteworthy to consider that the social appropriation of nature and its symbolic values has been a common process throughout European history to shape its identity and ethos. This can lead on the one hand to conservative movements, in which the traditions and virtues of rural life root national identity. On the other hand, a return to nature can be used to re-create future, alternative social visions, a process that we can identify as an on-going, recurrent phenomena (Coimbra, 2006). In this way, the outdoor life became more than a «natural experience»; it became a method to launch a message concerning national unity and common goals. In the 4H movement this can be seen in the strategy to maintain and develop the village community, without opposing modernisation (Sandell & Sörlin, 1994:17). Not only nature but also the people themselves - especially youth were perceived as part of the nation's resources. These resources were not to be lavished but should correctly be utilized and developed, under the banner of cultural values such as health, sobriety, and physical education. Outdoor life was seen as an important means for this (Ibid.) Finally, there was an increasing concern for the depleting effect of the emerging urban life and the confidence in outdoor life and nature contact as countermeasures. Out of the three organisations, 4H is its main promoter stating that “silk stockings and schlagers were replacing the local handicrafts and folk music” and that "youth love for nature and homestead should be awaken”(Ibid.:22).

The role that nature came to play as a national symbol of sound tradition changed after World War I. Although nature remained an important characteristic of Sweden, the new dominating idea from the late 30s, was the image of Sweden as a peaceful and well organised welfare state in which modernisation ruled. This vision was seated on a society based on democracy and technology and consequently agriculture decreased its importance in favour of industries. A new rhetoric model took nature as a source of raw material in need of a rational management; consequently agriculture and forestry remained an important part in the 4H movement's identity, as portrayed in the abundance of courses and competitions in forestry activities (Sandell & Sörlin, 1994). It is also during this period that increasing signs of environmental awareness occurs in several areas of society, and in 4H, such awareness became focused, particularly around conservation. Garbage and barbed wire removal were important 4H activities for nature conservation, and bird conservation and animal welfare consultants were employed early on (Ibid.).

However, it was not until late 70's that the youth organisations gradually took up an environmental discussion with criticism of the industrial society, global distribution issues and the problematic that has come to be associated with the concept of "sustainable development" (Sandell & Sörlin, 1994). The idea of a 4H environmental programme was first rejected in 1982, but regained interest and was implemented in 1990 (Sunesson, 1993). In this programme 4H states that:

all human use of land and forest disturbs the natural ecological balance. Nature seeks a diversity of flora and fauna while humans have wanted monocultures for cultivation. For us to be able to live in harmony with nature, all agricultural and forestry should be conducted as gently and close to nature as possible. Sensitive areas and flora and fauna should be protected. All animal husbandry must strive to achieve the most natural environment for the animals as possible so that the animals' natural behaviour is not inhibited (Sandell & Sörlin, 1994:30).

One difference to be found is that 4H has more of an instrumental "user perspective" on nature than the other organisations that emphasize the recreational use of nature along with a more general environmental perspective. This can be traced back to the roots of the 4H movement in the agriculture and forestry business (Sandell & Sörlin, 1994).

Today, the environmental statements of 4H can mainly be found in its vision and the policy document called the "4H spirit". The vision of 4H Sweden is:

to enable all children and youth to develop into committed and responsible individuals with respect for the world around them. This vision will be obtained by discovering the rich values and multiplicity of people and nature, through an interplay between the two. Each species and each individual is an important part of the whole, one not being of greater value than anyone else. (Riksförbundet Sveriges 4H, n.d.-b)

The vision is reinforced by the 4H spirit, including statements about ethical consumption, diversity and equality, and pro-environmental behaviour such as recycling, avoiding disposables, car-pooling, etc. (Riksförbundet Sveriges 4H, 2004). There are also 4H farm guidelines that mention environmental thinking such as green electricity, organic animal husbandry, etc. (Riksförbundet Sveriges 4H, 2010). A more thorough description of the policies relating to sustainability is included in appendix A.

Sandell & Sörlin (1994) state that the three studied organisations had little influence on the emergence of the environmental movement in the 70's, and suggest that their historical changes in outdoor life education mirror the social changes in society and environmental debate rather than original ideas of the organisations studied. This is attributed to the role of these organisations as bearers of social values rather than critics. Even though the 4H movement was critical of many of the effects of urbanization, “perhaps a more radical perspective on the current societal developments would have been contrary to the interests of farmers.” (Sandell & Sörlin, 1994:34). In fact, at its origins, criticism seems to be a stance of upholding tradition in face of change rather than change itself. An early starting point of the 4H movement was not to take any political standpoint, which still today is a corner stone of the movement, as the organisation states itself as «politically independent», (Riksförbundet Sveriges 4H, n.d.-b; Sandell & Sörlin, 1994). All of the above aspects seem particularly relevant to understand some of the challenges 4H faces in relation to the dynamics of its wider social context, as we shall see later.

2.3 Structure of Swedish 4H

There are three scale levels in the Swedish 4H organisation: the national, the county and the club level. The clubs are organised in counties, which are supported by the national level:

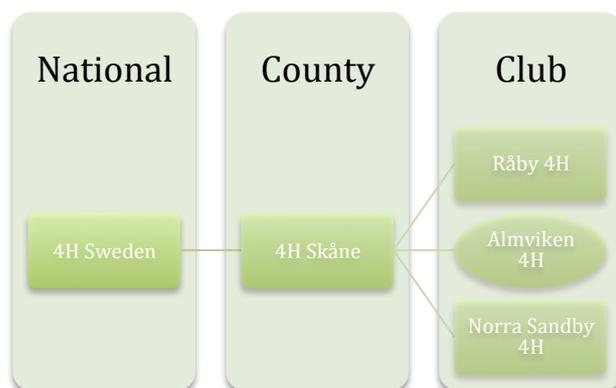


Figure 1: An example of the structure of 4H, with three clubs in Skåne County, of which one of them runs a farm (Almviken 4H farm).

Decision making in this type of membership-based organisation is based on a democratic process, where the ultimate formal authority rests with the membership which, through the general assembly, appoints the organisation's board, which in turn appoints the executive (Einarsson, 2012). In practice, members from the local clubs bring forward suggestions and chose representatives for the county boards, which in turn do the same for the national board.

The executive in this case could be members (volunteers) or employees. There are employees at all levels, however most of them work at farms. The system is decentralised, which means that farm club boards have large decision-making power over how to run the farm and employees.

3. Theoretical framework

3.1 Social learning

Social learning is a concept that is becoming increasingly used in the quest to realize a more sustainable world. Still, the concept is vague and there are multiple different definitions available in the literature, referring to different processes with different goals in mind (Lotz-Sisitka, 2012; Reed et al., 2010; Wals et al., 2009). In this project, the ideas of social learning will mainly be retrieved from Wals et al. (2009), together with the concepts of single- and double loop learning, which will be related to systems thinking.

Wals et al. (2009) describe the main characteristics of social learning, as the process of learning from each other using the plurality and diversity inherent to groups. In such process it is necessary to establish quality communication, social cohesion and spaces of trust that allow for creativity to immerse in seeking solutions. The importance of collective meaning is stressed, i.e., the finding of “collective goals and/or visions shared by those engaged in the process” (Wals et al., 2009:28). This requires that people become aware of their own framing habits in contrast with alternative frames provided by others and collectively come up with new ideas (Wals, 2007). Such approach advocates that shared meaning making and problem solving creates ‘ownership’ with respect to both the learning process as well as the solutions that are found, which increases an overall sustainability. The use of plurality and diversity in groups often entails the emergence of conflict and dissonance. In this approach, such dissension is thought to play a key role in stimulating learning, creativity, and the co-creation of new ideas. The challenge is to achieve the “optimal dissonance”, as too little is likely to prevent social learning and too much could lead to a blocking of interaction (Wals & Schwarzin, 2012; Wals, 2007).

One concept that has been frequently used in social learning, borrowed from organizational learning, is the single and double loop learning. Single loop is defined as learning new skills and capabilities or solving problems within the current set of rules, values, norms and objectives of the organisation. Double loop learning on the other hand involves the questioning of the underlying assumptions, values, norms, and objectives (Argyris & Schön,

1978; Smith, 2001; Van Grinsven & Visser, 2011). This approach puts focus on critical reflection, which is seen as essential for moving from one step to the next (Buchy & Ahmed, 2007).

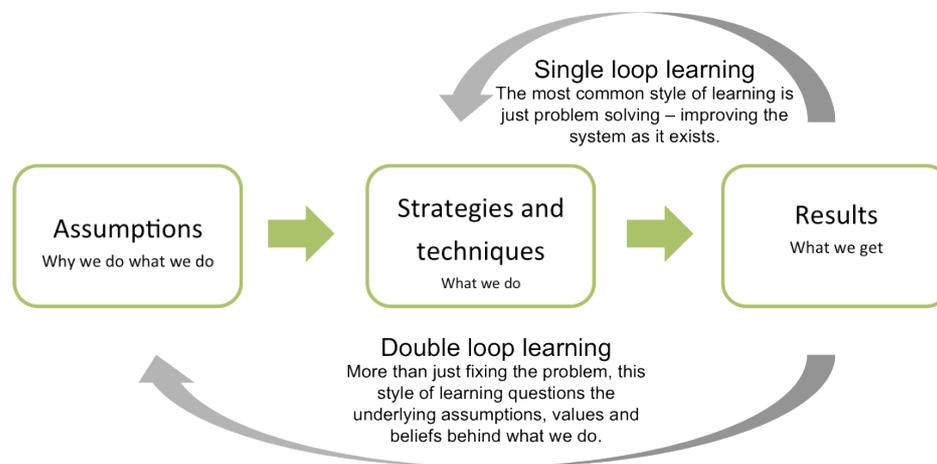


Figure 2: Single and double loop learning (Bryant, 2009)

The more complex, dynamic and turbulent the organisation’s environment is, the more double loop learning is needed (Van Grinsven & Visser, 2011). This is valid for social learning at large in relation to systems, as “it is particularly in a period of dynamics and insecurity that one must rely on the learning ability of the system and, with that, on social learning” (Wals et al., 2009:8). I understand this as the need for the system to develop and change with its environment.

4. Epistemology and methodology

Action research differs from conventional research in how knowledge is understood and created. A basic assumption is that knowledge is not a freestanding unit that can be found “out there” and therefore partakes of the general legacy of social constructivism (Bryman, 2012). Moreover, knowledge is seen as something created by people from their experience in a constant process of reflection on action (McNiff & Whitehead, 2001). In this process, researchers are not privileged, but contribute as one relevant knowledge system, amongst others, in the collaborative knowledge creation. This stance entails a transdisciplinary approach where those who are affected by the situation studied become part of the research (Lang et al., 2012). One important element in the knowledge creation of action research is the normative stance of what “should be”, which allows action research to strive for change towards an alternative future (Svensson & Aagaard, 2006). This type of transdisciplinary,

diversified, reflexive knowledge produced in the context of application has been named by Gibbons (1994) as the emerging Mode 2 science. Given this premises, in building a theoretical and methodological model, my approach resembles a process of *bricolage* (Lévi-Strauss, 1966), where the researcher uses available materials and tools to “connect the parts to the whole, stressing the meaningful relationships that operate in the situations and social worlds studied”(Denzin & Lincoln, 1994:3). Furthermore, my research has involved moving between theory and data which Ragin and Amoroso (2011) describe as retroduction. This is the core of the dialectic relationship between action and research: the cycles allowed me to gather data through action, reflect and conceptualise this experience, relate to existing theories, and start another cycle with new action and gathering of data building on the knowledge from the previous cycle.

According to Dick (1993), there are several reasons for not doing action research in a Master Thesis. It is considered to be harder than conventional research, as you have not only to do research but also take responsibility for change. This is likely to take more time, energy and creativity. Also, new skills are needed in learning new ways of doing research. It requires a different form of communication that lies beyond more conventional formats. This often results in a longer thesis and a different structure. Furthermore, library work might be more demanding, as it is hard to tell ahead what literature is relevant in comparison with conventional research. In most forms of action, as in my case, the relevant literature is defined by the data one collects.

With this being said, I still consider action research to be the appropriate method for this thesis. First, I considered it to be a good chance to practice what we have learnt in the LUMES programme about sustainability challenges and the need for an action oriented approach. As my project and research question consider *actual* change towards sustainability, an appropriate research method was required. Secondly, as my research question involves social learning in theory and practice, I needed an approach that would allow this learning to be at the centre of research. Action research has a core of learning, both for practitioners and for the researcher (Kalliola, 2009). This also represented the opportunity to use action research to increase my own learning process from the thesis through systematic reflection (Dick, 1993). Third, action research is a suitable approach in studying complex systems, such as an organisation (Zuber-Skerritt, 2001). I wanted to actively engage with the organisation and produce knowledge that would be useful *to them*. For this I consider action research suitable as “the users themselves must be co-producers if the new knowledge is to be useful in their situation” (Svensson & Aagaard, 2006:22). Fourth, the intention of achieving change requires a flexible and responsive approach, which is provided in action research. This model

accepts that reality does not follow a linear pattern, and that people are unpredictable (McNiff & Whitehead, 2001). As I did not know what response I was going to get on my ideas, I expected that I would have to be flexible throughout the whole process, not only in my research design but also in data collection and analysis.

4.1 Data collection

I chose to use the action research spiral of «plan, act, observe, reflect» in my research, which is commonly used in action research (McNiff & Whitehead, 2001).

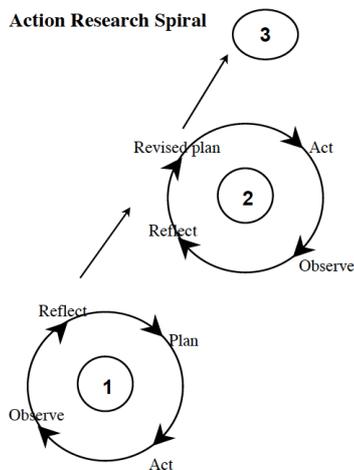


Figure 3: Two cycles in the action research spiral (Zuber-Skerritt, 2001).

Data collection took place between February 2012 and March 2013 and included the following cycles:

Cycle 1	February-June 2012	Project Start
Cycle 2	August 2012-January 2013	Making Change Happen ¹
Cycle 3	28-30 December 2013	Organisation Overview
Cycle 4	26 January 2013	Sustainability Lab 1
Cycle 5	26 January 2013	Sustainability Lab 2
Cycle 6	5-12 March 2013	Challenging Data

I relied on several sources of data for analysis, as recommended for action research (Dick, 1993), namely literature (articles, studies of 4H documents, magazines, etc.) focus groups, interviews, reflexive diary, conversations individually and in groups with people from

¹ Making Change Happen is a LUMES course aiming to bring knowledge to action.
http://www.lumes.lu.se/html/making_change.aspx

different parts of the organisation. Such variety of information and methods allowed me to do triangulation, that is to increase validity of analysis by drawing on multiple viewpoints (Creswell, 2008).

Dick (1993) states that one of the key principles of action research is to let the data decide. In this study, I have used information from the previous cycles to determine the next step. Sometimes this led to follow the initiatives of the organisation, other times to identify what information was lacking in order to answer my research questions. I refined the cycles along the way, for instance including more and more reflection, changing my research questions, and challenging the information from the previous cycles.

4.1.1 Focus groups

Focus group is a method for collecting qualitative data through a group interview concerned with exploring a specific theme or topic (Bryman, 2012). The opportunity to do focus groups came, not as a call from me, but as part of an event in the action process. I took the opportunity to connect my research to the spontaneous needs of the organization and use the occasion to facilitate a process of social learning, namely to both contribute and learn about the thoughts and experiences of others, and jointly construct meaning; in this case, the meaning of 4H and sustainability (Jupp, 2006). Focus groups within this specific context serve as an example of how, in this action research methodology, there was a shared ownership of the research process.

4.1.2 Interviews

The third cycle consisted of semi-structured interviews with three people that are or used to be in a strategic position in the organisation, as I wanted to get a better overview of the topic of sustainable 4H farms. I used my previous social networks in the organisation to choose three people with a relevant profile. The sixth cycle was made in order to challenge my data and, as Dick (1993) suggests, to “seek out disconfirming evidence”. For this purpose I chose to interview one farm which I knew is working significantly within the macro sustainability terms and one farm that recently started, and had an interest in macro sustainability.

4.2 Data analysis

I have conducted a thematic analysis of data by coding interviews and focus groups and extracting core themes that could be distinguished between and within transcripts. For instance, as recommended by Bryman (2012) I have looked for repetitions, metaphors,

missing data, etc. To evaluate the impact of the action research it is important to reflect on 1) yourself and the way your own thinking and behaviour is changing 2) others and how their thinking and behaviour is changing. However, this impact does not follow a linear cause and effect but rather “I can show that certain changes took place, particularly in myself, and different relationships evolved” (McNiff et al., 1996:42). To monitor change in others, I asked the interviewees and focus groups for reflections after the sessions and as the research progressed I kept track of my own thoughts in a reflexive diary as suggested by McNiff et al. (1996). As the first three cycles happened before action research was considered as a thesis method, this analysis was reconstructed from notes made by the author, emails, the Making Change Happen documentation, etc.

4.3 Limitations

When choosing to do action research over conventional research some trade-offs have to be considered. Replicability is hard to achieve at the same time as responsiveness, and action research values the latter on behalf of the previous in order to achieve change (Dick, 1993). Furthermore, local relevance is chosen over global relevance, as is often the case in action research (Ibid.). This means that the knowledge produced in this project will be applicable in the case-specific context of 4H farms and thus not generalizable to other organisations. However, readers are invited to judge the relevance of the findings of this case to their own practice situation and use the results for analytical generalization when applicable (Yin, 2003).

5. Results and analysis

5.1 Cycle 1: Project start

Plan

The project started with the idea to create a discussion about macro sustainability at the 4H farms, as I saw the need for them to develop with society in order for the organization to remain viable or self-sustainable. I wanted to do a pre-study on what the opportunities and barriers are and how sustainability could be further developed.

Act

I started in February 2012 by contacting the national office to suggest a project about 4H farms and sustainability. As I got green light from the national board, I applied for funding

together with the board. Other activities included writing articles in the internal magazine, and creating a Facebook page, as there was no forum for talking about these issues. I eventually decided to do the project as a Making Change Happen project and along the road joined two of my classmates. During spring I met with farms and before the summer we sent in our proposal with the idea to do a sustainability assessment of 4H and a practical project at Almviken 4H farm in Malmö. In mid July 2012, I introduced the project idea at the 4H national assembly in Uppsala.

Observe

From the very start I had a positive response from all the people involved, both from national level and farms. When I presented the idea at the national assembly, several people wanted to discuss the project. One of them was the chairman of 4H Jönköping, who wanted to start a new farm in Tranås. He needed someone to do a pre-study of the establishment and my presentation caught his attention. After a few weeks we agreed on doing the pre-study as our Making Change Happen project.

Reflect

This cycle seemed to trigger awareness about the topic and an interest in the national board, which both supported and later initiated an application for project money. The idea spread and got a positive response from several people and a concrete outcome came out of this cycle in the form of an offer to apply the ideas in practice on a new project in Tranås.

My main lesson from this first cycle was that action pays off. By provoking thought and bringing an idea, it was possible to start a process of change. At this stage I had only small indications of the relevance of the project to the organisation. I let my intuition guide me into what seemed to be the perfect timing, further confirmed by positive response. At this early point, many questions came up: Are the 4H farms sustainable or not? What does sustainability mean in this context? There was a lot of uncertainty and it was hard to see where the project was going.

5.2 Cycle 2: Making change happen

Plan

In August 2013 we started working on our new Making Change Happen project in Tranås. The purpose of the project was to investigate how establishing a 4H farm could contribute to

sustainability in Tranås municipality. We performed a pre-study to give concrete recommendations to further strategic action. We had three goals with the project: 1) to encourage 4H to discuss and communicate sustainability, 2) to encourage the municipality to realise the value of 4H, and 3) to establish 4H in Tranås.

Act

From August 2012, we conducted literature studies (e.g. documents, reports, articles, statistics), interviews and focus groups with different stakeholders from both 4H and the municipality, and field visits in Tranås. This resulted in a report² that takes as starting point the ecological, social and economic sustainability challenges that the municipality of Tranås is facing. It suggests how 4H can address these and a strategy for how to establish a 4H farm. Additionally, a short movie³ was made to present how 4H can address sustainability challenges in society. The report and the movie were presented to Jönköping 4H board in December 2012 and to the municipality in January 2013.

Observe

As for the first goal, to encourage 4H to discuss and communicate sustainability, we could see this slowly starting to happen after the project. The report and movie started to spread in different levels of the organisation and both staff and volunteers showed interest in using it for their own strategy to convince municipalities of 4H's value to society. One comment from a board member was that "with this [movie], we could sell 4H to any municipality"(Buschmann, et al., 2013:15). Because of the project in Tranås, the national organisation took the initiative to discuss how the organisation can relate to sustainability, at a national yearly course for staff and volunteers (Centrala funktionärskursen). I was invited to host two workshops in January 2013.

The second goal was to help the municipality realize the value of 4H. One of the things we could contribute was to make the municipality more interested with making a thorough study. The chairman of Jönköping 4H board put it this way: "had it not been for your study, there would have been less interest in the municipality. The fact that you talked to so many people and made a serious study was very important. And the sustainability focus made them even more interested." (Buschmann et al., 2013:15). This was further confirmed by a politician, saying that politicians and officials "will be very impressed as they have probably never got such a solid analysis of an establishment."(Ibid.). At the presentation to the municipality in

² The report can be found on the EFCF webpage: <http://www.cityfarms.org/researchitems/view/26>

³ The Swedish version of the movie can be found on <http://www.youtube.com/watch?v=PeFQ8fpCPps&feature=youtu.be>

January a wide range of stakeholders were present, representing politicians and officials, and representatives from business and civil society. There was a great interest for discussion among the participants.

The third goal, to establish 4H, has not yet happened, but the municipality and 4H have started negotiations to further investigate the possibilities for collaboration.

Reflect

This cycle resulted in some change in the thinking and behaviour of people involved. It resulted in a higher awareness about sustainability issues among 4H, which was triggered by our presentation, report and movie that served as a converging platform. Coming from the outside, we were able to help the organisation to see themselves with new eyes, in a bigger perspective. According to the chairman of 4H Jönköping, they do not normally consider the benefits a farm has to society and sustainable development, but rather focus on the animals and how to survive financially (Henryzon, 2012). These comments and the large attendance from the municipality indicate that our action made a change in the perception about 4H among the representatives in the municipality. As researchers we were able to reframe 4H identity from the cliché picture of an organisation that deals with animals and children in their spare time, to an organisation that can contribute to a sustainable society. We were also able to bring forward the synergy that could be created through combining the needs of 4H and the municipality. The diversity of stakeholders that showed up for the municipality meeting saw different values in establishing 4H in Tranås, which provided a good platform for discussion and exchange of ideas. This offered a good setting for social learning to ignite. Lang et al., (2012) states that transdisciplinary research can result in “intangible outcomes” where a learning process can empower and motivate stakeholders to contribute more actively to decision making and implementation. This seemed to be the case as the interest was high and resulted in further action as the municipality shortly after invited 4H to continue negotiations. The cycle also resulted in further action internally, as 4H took initiative to discuss this further by inviting me to do workshops.

My own learning experience from this circle included many different aspects. First of all, we were working with two different target groups – 4H and the municipality, who had heterogeneous interests. It was a good learning experience to navigate in this landscape and try to find common ground and synergy effects. I also learned how important it is to explain scientific concepts and theories more simply to a non-academic audience. This is addressed by Pohl and Hadorn (2008) as the problem of “not speaking the same language”, which can be a barrier to mutual understanding in transdisciplinary research. Additionally, it further

convinced me how macro sustainability could support micro sustainability as the municipality became interested when we framed 4H as an organisation that could help them solve sustainability problems. This shows the importance of the organisation being open to the outside world and learning and adapting with the system's environment.

5.3 Cycle 3: Organisation overview

Plan

As I started the thesis period I wanted to get a better idea about the topic of sustainable 4H farms and decided to talk to people that are or used to be in a strategic position in the organisation, in order to get an overview of the organisation in relation to sustainability.

Act

I conducted interviews with three people in December 2012/January 2013: one former county board chairman, one that used to be involved in the 4H farm committee, and one current member of the national board.

Observe

The main findings from these interviews were that the informants see great potential in 4H farms, the organisation is going through micro and macro sustainability challenges, and there is a lack of unity in the organisation.

When asked about the benefits of 4H and the farms to society, the interviewees see a great potential of the farms and raise macro sustainability issues, both regarding environment and society: "It is very good timing: animals and nature, environmental thought in an increasingly urbanized world. We have a very good niche and could have a lot more and better business". Other benefits with the farms brought up are the contact with animals, learning what a life is, understanding where food comes from, learning about farming history, and being a resting place for children and youngsters without a place in society. However, the most crucial benefit of 4H farms is the democracy education of youth: that the members are involved in decisions about their free time and learn how democratic decisions are made in society.

Despite a great potential for the organisation, it has major micro sustainability challenges as it is steadily losing members and clubs and there are many obstacles hindering development: "It is an organization that for a few years has been mishandled and where strategic and developmental issues for the future have been ignored. And there is still no plan for the future

of the organisation.” The staff and members are forced to spend their time “putting out fires,” that is, solving problems (e.g. financial or related to employer issues) that have been left untouched and unsolved for many years, leaving very little time for development of the organisation. These problems often have to be solved by the national level, even though they might be caused by lower levels of the organisation, which has led to the national board suggesting a thorough reorganisation, which entails a centralisation of employer responsibility.

One other reason for the reorganisation is to work towards a more cohesive organisation. All the interviewees tell how the organisation is lacking unity. First, there is a division between clubs and farms:

There is a split within the organization. Clubs may find that farms are getting too much attention. The farms on the other hand are not very good at saying that it is a club that runs the farm/.../ Different types of people are drawn to different activities. If my 4H is about animals and your 4H is about meeting and doing activities together, then we have different starting points. There is a lack of discussion about this.

This division is seen as a problem, but at the same time the interviewee that was part of the farm board also highlights how the special needs and different activities of the farms also have to be acknowledged. Secondly, the informants raise a great difference among the farms in terms of activities, size, culture, funding, etc. Some farms are more like youth recreation centres or riding schools, missing the fundamental democratic education. There are 4H farm guidelines to make the farms work in the same way, but as staff is lacking at the national level these are not properly implemented and followed up on.

The organisation has problems with communication, both internally and externally. Externally, there is no common plan for what to communicate, but “there are 30 of them, and they contradict each other”, as people have different ideas of what the organisation is doing and what it stands for. This results in a difficulty of getting members and funding. Internally, there is a lack of communication and collaboration between farms. Informants express different views on the interest of farms in communicating and collaborating more. One of the interviewees says there is an interest in meeting, developing and learning among the farms. Another tells how when the national board invited all the farms to a network meeting, only 2 out of 38 signed up.

There seems to be a general lack of implementation of and reflection about the policies. Some core values are quite well incorporated in the organization, such as the non-drinking and smoking, other themes, such as environment and ethical consumption are less discussed at the farms. Also, opinions might differ - for instance, on organic food. One interviewee suggests that development might be hindered by an old-fashioned structure and culture, where one often meets the attitude “We always did it this way”.

Reflect

After interviewing these persons, I started to become aware of the complexity of this organisation and its relation to micro and macro sustainability. The tough situation of the farms and the organisation in general became obvious to me. Farms are facing considerable micro sustainability challenges as well as macro sustainability challenges and policies seem to be poorly implemented. However, this cycle strengthened my idea of sustainability as a relevant topic for 4H, as the interviewees expressed how they wanted to work more with for instance environmental awareness, but were hindered by micro sustainability issues. One other barrier that seemed central is the great diversity in the organisation and the lack of unity. A need for unity is expressed, but a unity that still acknowledge the difference and special needs of farms. I understand this as a need for shared identity, allowing for difference. The lack of a shared identity results in communication problems with the system’s environment and consequently micro sustainability problems of attracting members and finance. Also, a shared vision for the future is lacking. The organisation is described as old-fashioned and the need for change and double loop learning stand out as important from these interviews.

5.4 Cycle 4: Sustainability lab 1

At the national course for staff and volunteers, I was invited to host two workshops. The first workshop was for staff at county and national level. The participants were four county directors and one employee from the national Swedish 4H. Two of the participants were also representatives of the national board.

Plan

My plan with this workshop was to have a discussion about sustainable 4H farms and to present some results from the Making Change Happen project. I also wanted to facilitate a social learning process about sustainability and at the same time gather research data.

Act

I started the presentation and after only a few minutes, the participants took initiative for a discussion. I decided to encourage that discussion, since I wanted to allow the natural flow of the conversation, even though the original plan was to give some background first. This meant that we did not make it to the discussion material I had prepared until the very end of the session, as the participants were eager to discuss their ideas on the topic, sometimes even struggling to make their voice heard.

Observe

The discussion mainly circulated around the macro perspective of sustainability, focusing on the environment. The policies are handled differently in different counties: one county inform leaders about the policies and have a fraction pushing for locally produced food, and the director of another county suspect board members put environmental issues and the policies low on the agenda. Generally, the picture is that even though the policies are good, there is a lack of implementation, like in terms of pro-environmental behaviour such as buying disposable cups and “Euroshopper white bread from the south of France” The organisation is lagging behind in environmental issues: “we were on the edge before and one of the organizations which were successful in this. Then I think we leaned back. It feels like society has gone about us.” The lack of implementation is explained by barriers such as economy, awareness, convenience and a lack of forum to discuss environmental issues. Furthermore, lack of communication is seen as another reason preventing the development of macro sustainability. The farms are described as “island” with a “box mentality” that generally do not collaborate, even within the same county. Furthermore, the cooperation seems to have stagnated over time during the last 15 years. One of the participants suggests that this could be overcome with the reorganisation that allows centrally employed staff and more requirements to follow a “common red thread”.

The participants agree that it is crucial not to limit the sustainability discussion to 4H farms, but to anchor the environmental issues in the whole organisation, in order to communicate the same thing. The discussion focused mostly on environment and not so much on social issues. This is attributed to the lower awareness on the former compared to the latter.

Reflect

At the reflection at the end of the session all the participants expressed that the discussion had been relevant to them and that the topic of sustainability is very important to 4H. The fact that the participants all agreed on the importance of the topic to 4H, and the need for action, is a step towards shared goals. This group of participants were already a formed group and my

impression was that the social cohesion and trust was high in this group, which was also confirmed by other participants. Conflicting frames were discussed and even though the group was homogenous in roles, the differences of counties were put forward. There was critical reflection of the way the organisation works with macro sustainability, mainly concerning environment, which indicates some degree of double-loop learning. Several new ideas were generated by the discussion, which in social learning theory would be the co-creation of ideas.

As a researcher, I learned that I need to be even clearer about the structure and learn more about techniques for facilitating a focus group. I chose to follow the flow of the group, as I did not want to control the situation too much. This allowed the participants to have ownership of the process and interesting points were brought up which answered many of my questions. However, my thought was that the structure could have been made clearer in order to steer the discussion somewhat more, which I wanted to try for my next focus group. The cycle gave me new insights, about the importance of including the whole organisation in the discussion in order to become more united and further confirmed how the environmental issues are lagging behind. This is further amplified by the discussion focusing on environmental issues over social issues, which indicate that this is not sufficiently integrated in 4H. As this also seems to be the case historically, I started to see how history could be an explaining factor in this case.

5.5 Cycle 5: Sustainability lab 2

The second workshop was open for anyone at the course. Those who showed up were two farm managers, one farm board chairman, two persons from the national board, and one person interested in starting a farm without having any previous experience of 4H.

Plan

My plan with this workshop was the same as the previous, however to be more clear about the structure. I expected the discussion to be more about macro sustainability at a concrete level than the previous workshop, as I hoped for the people working at the farms to come there.

Act

I started the presentation and soon the discussion started. Strong opinions and disagreements came to the surface and the discussion moved between conflict and consensus. The tone was sometimes upset and there was not a quiet moment for almost two hours. This focus group, even more than the first one, was hard to control. I decided to give space for the discussion, as

it seemed to be very much needed. We hardly made it through the presentation, and not at all to the material.

Observe

There was a clear need of discussion about the farms in general and especially micro sustainability in terms of viability of the organisation.

Among the main findings of this focus group is that the situation at many farms is critical, both in terms of economical and human resources. Most farms are dependent on municipal funding and as the municipalities are getting less financial resources it hits the 4H farm. Furthermore, they have to “hunt” project money in order to manage economically. The human resources in terms of staff and volunteers is often lacking at the farms. This is a situation that seems to become increasingly difficult, partly because of a decreased family involvement. This decrease of volunteers puts high pressure on the ones that are engaged.

The discussion circulated around the need for central coordination from the national level, as “the wheel is reinvented over and over again”. Farm participants ask for coordination in terms of rights (e.g. help with materials, negotiations, and education) and clear obligations of what a farm should fulfil to have the right to call themselves a 4H farm. Furthermore, they express a need for a farm contact person at the national level. The farm network is discussed and one reason given for not responding to the invitation is the pressing situation for the staff at the farms, which mean that they do not have the time or the energy to engage. Another is insufficient information, where farms urge the national level to call them, come out and visit and hand pick people for a network. These comments above indicate how there is a need for the farms to have more personal contact with and coordination from the national level.

The participants from the farms also in different ways express the need for a forum where they can meet in person with other farm people. One of them express how the kind of forum that was provided through this workshop was appreciated: “We are all in our little bubble in some way ... It's pure ‘aha experience’ for me to hear that others have the same experience as I do”.

One recurrent theme was the need for 4H to change and develop with society. On the one hand, they acknowledge that 4H has to stop looking back and instead look at what needs to be modernised. On the other hand they push for the “genuine 4H knowledge” to be kept, as expressed by one of the farm participants:

I can stand up for 4H and feel that 4H is great, but I do not have the 4H stamp on my forehead. I have not been in the organisation since I was a child and therefore, I have not the genuine 4H-knowledge and this need to come back [to the farms] in some way.

The participants agree that this knowledge has to be kept, but at the same time the organisation needs to modernise.

At this point I ask why the urban farming movement is not involved in the 4H farms, as they are young and also have a focus on agriculture. This is attributed to 4H using an out-dated way of describing the concept and the need for collaboration with other organisations is raised. 4H has traditionally seen other organisations as competition instead of possible partners. There is consensus that this view is no longer working and that they need to start collaborating for the survival of the organisation. The urban farming and environmental awareness is also raised as a possibility to increase financial viability.

Reflect

During this cycle I consider learning to have taken place as the diverse mix of participants generated a discussion that gave them a chance to meet and have an understanding of the situation and ideas of the others. The discussion moved between conflict and consensus, which according to theory is the point where most learning takes place. The participants raised different opinions and questioned each other's frames and the way the organisation works, calling for new innovative ways of working and collaborating. There was critical reflection about the underlying assumptions of the organisation and the need to break with the way they always did it and to develop with society, which I consider to be double-loop learning. I saw some signs of co-creation of new ideas that came from bringing my ideas to the table and to let them discuss their ideas and there was a clear sense of ownership of the process. The workshop resulted in further interaction, and the discussions were continued later at night in different settings.

I tried to be very clear about the structure this time, which turned out to be of no importance, as there was such a pressing need of the participants to express their opinions. I would have wanted the participant who had no previous experience of 4H to get more space, as she had an outsider's perspective and was engaged in macro sustainability issues. However, this was difficult to facilitate, as the rest of the group wanted to discuss micro sustainability. Even though the discussion did not touch much upon the macro sustainability at a concrete level, as was my plan, it gave me a lot of data on the micro sustainability and general situation at the farms. Perhaps macro sustainability cannot be addressed before micro sustainability is? Still,

one participant identified how working towards macro sustainability in terms of environment is important for the micro sustainability of financial viability. What also caught my attention was the “genuine 4H knowledge” - what is this knowledge? And why would you have to grow up with it? I understand this as a search for common identity and shared vision; what is to be kept? And what is to be developed? I also saw how important it is to include people with no previous knowledge of 4H in the discussion, to have an outsider’s perspective on the organisation. The importance of this interaction with the system’s environment also became obvious in the discussion about collaborations. The need for more communication between different parts of the organisation stood out again as an important theme.

I suspected though that the perspective I had from these three farms were only part of the picture. I felt a need for interviewing farms that were not having as tough of a situation.

5.6 Cycle 6: Challenging data

Plan

My plan with this circle was to challenge my data and seek out disconfirming evidence. As my last circle (the second focus group) mainly focused around micro sustainability and not macro sustainability, because of the tough situation of the farms, I wanted to have the perspective of other types of farms that were not going downhill.

Act

First, I chose to interview the initiator of a recently started farm, who I contacted in the very beginning of the project, as she had an interest in working with sustainable 4H farms. Secondly, I made an interview with two employees at a farm who is known for working well and focusing on macro sustainability in terms of environment. At the end of both interviews I introduced the Making Change Happen project and showed the movie.

Observe

The first person interviewed showed a good understanding of what 4H is about. The interviewee chose to contact 4H because of the values of the organisation that “appealed to my heart” and because 4H is an established organisation where the children can not only engage in the farm but also use the broad network of 4H to take part in camps or even go abroad. The democratic aspect is clearly valued as the interviewee stresses how it is important that the children grow in their roles, their responsibilities and their leadership. As the farm is new, they did not have time to work much with macro sustainability issues such as

environment or to work actively with the policies. However, they are interested in doing so, for example through organic farming which is included in the applications to funds, etc. The issue of reinventing the wheel comes up, as there was little material available when starting the farm. Also, the 4H marketing material is old and 4H “feels like a 70-80's organization that actually have to lift a little” and start new farms in order to have new members. The interviewee questions why there is not more marketing of 4H and collaboration between the farms.

The second interview showed that even though this farm was struggling as hard as others with micro sustainability in terms of financial problems, they managed to focus on macro sustainability. In fact, their study visit focusing on the natural cycle is the most popular one among the schools, which means that they can use macro sustainability to support micro sustainability. The policies are included in the activities and the economy is the main issue stopping them from working more with the macro sustainability issues, and they believe that this is the case for the rest of the farms as well. Both employees have a background as volunteers in 4H and push how important this is for farm employees. At many farms, where the employees do not have this, “they do not quite know what is required of them”. They explain how it is difficult to understand how the organisation works, and “get the right feeling for it”, especially without sufficient support from the county or national level. The need of central coordination comes up, both in terms of stricter regulations for farms and help with for instance materials, as the farms keep reinventing the wheel. Furthermore, the importance of marketing 4H is stressed, as this is directly related to their possibilities of receiving higher financial support from the municipality. They also see how higher demands from society is forcing the farms and 4H to market themselves better and to develop. This farm does not have a big problem of engaging volunteers; they have an active leadership programme and engage “short time volunteers” for weekends to take care of the animals.

Reflect

These interviews had more of a traditional setting, were I mostly listened and contributed with my ideas shortly at the end of the interview. This made the reflection part at the end more vague, as there was not the same sort of exchange of ideas as in the focus groups. However, the interviews created awareness about the project and both farms wanted to use the report and movie in order to have new ideas and negotiate with their municipalities.

From these two interviews I learnt how important it is to have the right people working at the farms. In spite of financial troubles, the staff at the second farm managed to keep it going and to have a macro sustainability perspective. Furthermore, I see their role as highly contributing

to the ability to attract and keep volunteers. The meeting with the first farm confirmed the importance of using the “outsiders perspective” of new people in the organisation, as the interviewee brought different thinking of how to strengthen micro sustainability of farms through using private sponsors and competing with “the personal”. This interview made me realise how the 4H knowledge can be obtained without growing up in the organisation. Still, lacking 4H knowledge seems to be a common problem of the farms, which I see as related to the lack of central coordination. The marketing discussion proves how important it is to keep developing with society and interact with the system’s environment in order to assure micro sustainability.

6. Summary and discussion

6.1 Communication

One recurrent theme reported from the field is that there is a lack of communication between different parts of the organisation system and with the system’s environment. Farms are described as “bubbles” or “islands” with very little communication with other farms, the national level and other organisations. One consequence of this is that they keep on ‘reinventing the wheel’. I understand this as a lack of single-loop learning, in this case understood as transfer of knowledge. This is of course very inefficient and the resources at the farm could have been used for better causes. One the one hand, farms express a need for a communication forum. On the other hand, the forums that do exist are not properly used by the farms. There seems to be interplay between the farms and the national level, where I understand the two different perspectives as follows:

Farms	We need a forum where to meet and we need help from the national level.
National board	There is a forum and there is help, but you do not engage in these possibilities.
Farms	You have to reach out to us in person, we do not know who you are and who to contact. Moreover, when we have been trying to contact you xx years ago, there was no response.
National board	We cannot reach out to everyone in person, we have too little resources. You have to contact us when you need it.

First of all, for social learning to occur, it requires the communication and interaction of different actors (Muro & Jeffrey, 2008) and therefore sufficient communication forums is a pre-condition for social learning. Secondly, in order for social learning to take place there needs to be a certain degree of social cohesion and trust between participants. This does not seem to be the case from the results above. Without social cohesion and trust, the system

becomes less capable of dealing with setbacks, which in the setting of 4H could be understood as the micro sustainability being threatened. At the same time as social cohesion and trust is a precondition for social learning; it can also be an outcome of a social learning process. This seemed to be the case in the second focus group, where participants later continued the discussion with a seemingly higher degree of understanding of each other's perspective. Moreover, from observing participants in the workshop and at the course, I got the impression that they speak about problems openly and in a respectful way, which is promising for creating more social cohesion and trust. The lack of communication with other organisations can be seen as a sign of the system lacking exchange with the environment. Being open to the outside world and bringing in new people and ideas is a crucial process for the social learning and sustainability of the organisation.

6.2 Central coordination

The lack of single-loop learning leads the farms to request more central coordination. There is a wish for both help and stricter rules for what a 4H farm should fulfil. This wish is shared by the national level, especially focusing on the reorganisation and how this would allow the development of a concept for how 4H farms should work. The lack of central coordination leads to less development in general and has negative consequences for both micro and macro sustainability. Furthermore, learning is hindered, as the infrastructure for this, such as a communication forum, needs to be initiated by the national level.

The lack of central coordination in terms of enforcing regulations and providing material leads to a lack of unity among the farms. It should be noted that unity is challenging because of the diversity in activities, size, culture, funding, etc. This could explain the variety in how the farms engage in macro sustainability issues – some farms are occupied with basic matters and do not have the time for development. Also, the sixth cycle showed how engaged staff or volunteers is a very important factor. There is not only a lack of unity among farms, but in the organisation as a whole. This is expressed in a division between clubs and farms, which seems to be splitting the organisation in two camps. This highlights the importance of not only focusing on farms when working towards sustainability but to include the whole organisation of 4H. The lack of unity among farms and in the organisation becomes a problem when it comes to marketing 4H, which is a pre-condition for micro sustainability issues such as attracting finance, members and volunteers. A learning process seems to be needed to clarify what is a possible convergence in building a shared identity and vision for the future.

6.3 Identity and change

The results above have shown two main issues partly deriving from changing conditions in the systems environment, namely economy and the lack of volunteers. These two issues are frequently described as blocking micro and macro sustainability as well as social learning, including central coordination, communication and single- and double loop learning. Several farms around the country have economic problems and are threatened with closure. A parallel process is the change in how people spend their free time and engage in volunteer work. The results show how volunteers do not engage in the same way as they used to. It has become harder to recruit volunteers to run the farm boards and the family engagement has declined. This is in line with research about how people tend to be less loyal to organisations and more temporarily committed, sometimes without even being members in the organisation (Harding, 2012). But even though memberships in traditional organisations have been declining the last 20 years, the amount of voluntary work is stable (Svedberg, Von Essen, & Jegermalm, 2010). This could explain how the last farm had less trouble recruiting volunteers as they allowed a short-term commitment on weekends. As this downwards spiral of resources has been going on for some time, without being handled, the whole organisation is lagging behind and the few resources in terms of staff and volunteers have to spend time on “putting out fires” and handling the micro sustainability. This leaves little time for development of farms (in general and in terms of macro sustainability issues), which leads to even less economic resources becoming available, as no one has time to apply for project money or negotiate with the municipality. The organisation ends up in a vicious circle.

This is clearly a serious problem, but should not be seen as the cause of the sustainability challenges. The problems of assuring micro sustainability is certainly hindering developing macro sustainability, but the results also show the opposite, that macro sustainability can be a way to solve micro sustainability, as it has the potential to attract funding, and as others see the benefits of the organisation. In other words, an organization that is intrinsically interesting will find social support. The problem of lacking resources could be compared to a symptom, such as fever. Curing it will not make the infection disappear, as more money will not automatically assure the macro or the micro sustainability of 4H farms. As seen in the results, there is a complex interaction of factors where identity and the need to change with society stand out as central components throughout history until today. There are tensions in the organisation relating to this, which will be discussed below: political independence, opposing paradigms, and the “genuine 4H knowledge”.

The first area of political independence goes back to the roots of the organization. As seen in the background chapter, 4H has historically been lagging behind in the environmental debate. My findings largely confirm that this is still the case. As this was the case before the financial problems started, one has to look at other explaining factors. One such factor could be that 4H does not have a history of social criticism and seeks to be politically independent. Traditionally this has been understood as not pushing the agenda of a specific party or taking position in political issues. However, this is becoming increasingly difficult, particularly in matters of sustainability that can be considered inherently and unavoidably political. Giddens (1991) introduce the concept of “life politics” that is not about the traditional politics of left and right but a new kind of politics that involves reflecting on our personal everyday choices. Life politics are about “how we should live in a world where everything that used to be natural (or traditional) now has in some sense to be chosen, or decided about” (Giddens, 1994:90-1). This entails that we have increased abilities to make choices about our own lives and to understand more of the long-term consequences of our actions to environment, health, etc. (Roos, 1999). I would argue that not only individuals, but also organisations, such as 4H are increasingly being pushed to take life political standpoints. In fact, they are already doing this through their policies. Furthermore, this is closely related to the social learning approach of reflecting on a shared vision for what the organisation should stand for.

Some life political choices might challenge the heritage of the organisation, as modern farming and forestry have major impacts on environment (Millenium Ecosystem Assessment, 2005). This leads us to the second tension, where Beus & Dunlap (1990:590) argue that farming is involved in two opposing paradigms, namely the “conventional paradigm of large-scale, highly industrialized agriculture/.../being challenged by an increasingly vocal alternative agriculture movement which advocates major shifts toward a more ‘ecologically sustainable agriculture’”. This tension can be exemplified by the different views on organic farming that exist in the organisation. As the organisation has a strong heritage and connection to farmers, the conventional paradigm is present as this is the dominating paradigm in farming today. At the same time, this is being challenged by 4H policies that strive towards a more alternative way of farming. This tension will sooner or later have to be confronted in the organisation, when searching for a shared identity and vision of what 4H is going to be in the future.

This brings us to the third area, which has been raised in the results, namely the tension between developing with society and keeping the “genuine 4H knowledge”. First, my results show how one does not have to “grow up” in the organisation in order to understand what the organisation is about. Second, I see this discussion as a sign of how the organisation is

searching for identity in uncertain times. The organisation has to change - what is to be kept and what is to be developed? This is intimately connected to the exchange with the environment of the system. When new people come in to the organisation with an outside perspective new ideas are brought, which might challenge the old ideas and some of the “genuine 4H knowledge”. This is a crucial process for the sustainability of the organisation, especially in uncertain times. The diversity of perspectives could, when properly facilitated in a trusting environment, stimulate creativity in seeking new solutions. The challenge here is to create shared identity allowing for plurality. This is where a social learning process is crucial, as it allows the joint construction of vision and the meeting on a higher level. This higher level is by Max-Neef (2005:8) described as the value level, that goes beyond the present and immediate, aiming at “generations yet to come, at the planet as a whole, at an economy ‘as if people matter’”. This further confirms the importance of having a collective identity around a set of common values to survive as a living system (Capra, 2002).

7. Conclusions and recommendations

This thesis has been exploring the theoretical and practical relevance of social learning in assuring sustainability at 4H farms in Sweden, as well as the factors that block and facilitate this. The conclusions for the dual aims of action and research will be discussed below, followed by recommendations.

The action part of this project was to facilitate a process of social learning about sustainability at 4H farms. The outcomes of such a process cannot be determined beforehand but are part of the process. The dynamic character of this process makes it difficult to determine the extent to which a project contributes to sustainability. Some outcomes are more hard and tangible and others are more soft, process-based and long-term, and both are important for change and sustainability (Wals et al., 2009). The outcomes below range from hard to soft.

- 4H has started negotiations to establish a new farm in Tranås, with sustainability as one of the core messages.
- The start of a new cycle (April 2013) - an urban farming project at Almviks 4H farm in Malmö in collaboration with an urban farming education programme, an adult study association and an urban farming organisation. This evolved from actions taken in the first research cycle.
- The national 4H board has taken ownership of the process by initiating discussion about the topic and by applying for money to do a project about sustainable 4H farms.
- Further interest in the topic, indicated by spread of report and movie.

- Awareness and reflection about sustainability and 4H farms in the national board, among county leaders, and several farms around the country.
- A reframed picture of 4H farms as an important actor in contributing to sustainability in society, both externally and internally.
- Social learning in the focus groups in terms of single and double loop learning, co-creation of ideas, increased social cohesion and ownership of the process.
- Empowerment of some actors within the organisation.

The research aim of the project was to assess how social learning can be relevant in assuring sustainability at Swedish 4H farms, as well as identifying factors that block and facilitate this.

Factors blocking are a lack of:

- Communication between different parts of the organisation system and with the system's environment
- Single- and particularly double learning about micro and macro sustainability
- Central coordination
- Spaces/occasions for incrementing social cohesion and trust
- Shared identity and vision for the future
- Resources in terms of economy, volunteers and staff
- Historical tensions of having opposing farming paradigms and not taking stand in political issues

Factors facilitating are:

- Consensus in the organisation that double loop learning is urgently needed in terms of reflection about where the organisation should go in the future.
- Very engaged members that see a great potential of the organisation and the need for it in society.
- A leadership that sees potentials of farms and focuses on strategy and development
- Good ground for creating more social cohesion and trust in the organisation, as people tend to relate to each other in a respectful way and problems are spoken about relatively openly.
- Rich possibilities to interact with the system's environment to include new ideas on sustainability, e.g. through interest from new people coming in to the organisation, collaboration with other organisations, and already existing forums that 4H could take advantage of, such as the European Federation of City Farms.
- An increasing societal awareness about sustainability, and acknowledgment of the need for children to know more about food production, nature, etc.

The whole research process confirmed that the organisation of 4H is facing micro sustainability challenges such as declining resources in terms of economy and volunteers, and communication problems. Moreover, 4H as a whole seem to be lagging behind in macro sustainability issues related to the environment, with some exceptions that can be traced back to individual efforts. Two main reasons are found for this; on the one hand this has to do with the organisation being occupied with solving micro sustainability issues, and on the other hand this could be traced back to the history of 4H, not taking stand in political issues and having opposing farming paradigms are being present in the organisation. The study identifies a need for furthering a social learning process, clarifying the possible convergence in building a shared identity and vision, and to change with society to assure micro and macro sustainability.

The project has shown the complexities of assuring sustainability at 4H farms and the interactions between micro and macro sustainability. Some parts of macro sustainability are hard to achieve before solving micro sustainability issues. On the other hand, it has also shown how implementing macro sustainability can be a way to solve micro sustainability issues. Furthermore, it has shown how sustainability issues cannot be understood by only looking at parts of the organisation, but involves deeper structures such as history, the organisation as a whole and its interactions between parts and with its environment. This proves the usefulness of a systems perspective to sustainability issues in an organisation.

4H is approaching a reorganisation, which will address many of the problems raised in this thesis. This reorganisation mainly focuses on the structure and “hardware” of the organisation. With this thesis I want to stress the value of the “software” to further develop sustainability. In a search for shared identity, I would suggest 4H to keep a fine balance between staying close to its core and develop with society.⁴ What is a genuine 4H knowledge? What is the heritage? How can this be relevant to today’s youth? And how can the organisation meet on a value level and create a shared identity and vision still allowing for diversity?

To create the conditions for this discussion, 4H needs to develop more social cohesion and trust between the different parts of the organisation. Creating more communication spaces to meet and discuss could approach this. There is a need for forums both for the organisation as

⁴ An interesting source of inspiration is the Swedish temperance movement IOGT-NTO, who succeeded in developing with society at the same time as keeping close to its core values by including the ideas of new members (Einarsson, 2012, 2013)

a whole and specifically for farms. The 4H farm network could function as a platform for knowledge sharing and reflection, so that they can stop ‘reinventing the wheel’ and develop new ways of working.

In this social learning process it is crucial to interact with the environment and being open to the outside world in order to adapt to new circumstances. 4H should not only embrace the diversity of people and opinions *in* the organisation, but also bring in the outside perspective of new members and stakeholders who do not have the “4H stamp” on their forehead. The dissonance and potential conflict that this would bring can be stimulating, in creating better ideas, provide that it is properly facilitated.

Also, I would strongly recommend 4H to connect this discussion intimately with macro sustainability. In a time where children spend less and less time in nature and know less about food production, the core values of 4H are needed more now than ever. Good policies are already in place, and by contributing to macro sustainability others can see the benefits of 4H, which can be a possibility for 4H to attract funding and break with the vicious circle. In the long run, this could assure micro sustainability. Besides, if 4H does not go in this direction, it is very likely that other farms will.

Agriculture has a multifunctional nature, producing not only commodities, but also noncommodity outputs such as environmental services and cultural heritages (IAASTD, 2008). However, farming of today largely fail to integrate social, economic and environmental components, which is the condition for a sustainable agriculture (Brodt et al., 2011). 4H has a potential of bridging these perspectives at their farms and show a sustainable path for future generations. Collaborations with different stakeholders, ranging from The Swedish Farmers Association to the Urban Farming movement, could be of great importance not only for assuring micro and macro sustainability at the farms, but also for providing a platform for social learning on a larger scale. To be able to do this, 4H needs to reflect on their standpoints in this debate, which is likely to trigger discussion about the political independence. As issues regarding sustainability often involve making political choices there will be a need for discussing what it means to be politically independent. Is this possible? What are the borders? These discussions are crucial and potential disagreements can be an important part of the social learning process aiming to develop the organisation.

Finally, in order to be an actor in the transition to a more sustainable world, 4H needs to integrate environmental, social, economical and political perspectives of farming,

acknowledging how these human and natural systems are interlinked – in scales ranging from local to global, today and tomorrow.

8. Personal reflections

This project allowed me to see in practice how the role of a researcher in the field of sustainability science can contribute to a change process. Besides being one of the stakeholders and co-producers of knowledge in this project, I have been able to connect the parts to the whole, for instance connect different knowledge from participants with research, history of the organisation, trends in society, etc. As a sustainability scientist I think one can help reframing issues and put them into a new context, as was the case with framing 4H as an organisation that is contributing to sustainability in society. This process can empower people. The same goes for action research where Svensson & Aagaard (2006) state that the main role of researchers is not to solve the problems but to “assist participants in defining and analysing them – often by re-contextualising them or creating arenas where participants can play with ideas” (Svensson & Aagaard, 2006:40). I see myself as a catalyst, that could help 4H see “discrepancies between stated intentions and actual behavior” (Susman & Evered, 1978:593) and also see the possibilities for the future. Another part I found important as a researcher in this field was to see the synergies and connect the needs of different stakeholders. As Cash et al., (2003) suggest, sustainability scientists can “manage boundaries”, that is to overcome gaps between scientists, decision makers, users, etc. by communication, translation and mediation.

For future research it would be interesting to follow up on the process and look at the long-term learning effects of this project. Also, we only started framing the issue; to continue and better frame especially macro sustainability could be an important next step. Another interesting area of research would be to follow the learning process of a group of 4H farms and different stakeholders such as farmers and environmental movements.

My personal journey has been from intuition and action to science and research. It has been about learning a new way of looking at research and sustainability in the light of action and reflection. It has been a lesson of trying to practice what we preach, and connecting my own knowledge to practice. I have learnt new practical skills such as facilitation and a way of working systematically towards change through the action cycles. It has been challenging to trust the process, and not trying to control it but rather be flexible and follow the logic of the events. Still, I think the change of perspective on sustainability in relation to social learning is my most important learning outcome, as noted in my reflexive diary:

I am changing my perspective on sustainability. It is not as much a goal as it is a process. It happens when we sit down and reflect together upon ourselves and our practices, how they affect us, our family and friends, our neighbours and people at the other side of the world, those not yet born, and our ecosystems. This is how we *do* sustainability.

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Appendices

Appendix A: 4H policies relating to sustainability

There are two guidelines relating to sustainability and 4H farms: “The 4H spirit” (4H-andan) and “4H farm guidelines” (4H-gårdsverksamhetens syfte och riktlinjer).

The 4H spirit

“The 4H spirit” is a policy document, which has been developed to achieve the vision of 4H by clarifying particularly important positions that will permeate the operations. A summary of the document follows below.

Ethical consumption – In efforts to educate members of committed individuals, it is important to raise awareness about the production behind the products we consume and people living in different parts of the world. They should strive for purchasing goods with ethical aspects in mind (such as human rights, animal husbandry practices and the allocation of funds and resources).

Environment – An important part of 4H is to show respect for the world around you, including the environment, for example through effective use of resources. At all 4H activities and facilities they will, if possible seek to: sort waste and compost, avoid disposables, do car-pooling, use locally and sound produced fodder, adapting the information flow to the least energy-consuming and most environmentally friendly way, use the least environmentally damaging alternative for cleaner, chemicals, fuels, etc.

Diversity and equality - Since 4H's vision is to reach out to all children and young people, it is important to promote a non-discriminatory attitude so that everyone feels welcome. Every member should have the same opportunity to participate and influence by being, for instance, member of the Board. To increase understanding of different cultures 4H should promote international cooperation and establish contact with similar organizations in other countries. It should also promote greater understanding and contact between generations.

Tobacco, alcohol and drug use - 4H should strive for providing a tobacco-free environment, where non-tobacco users do not need to come in contact with the tobacco. 4H should offer interesting and fun alcohol-and drug-free activities and actively discourage gateways to drug use, and aim for increased awareness of drug-related problems.

Healthy diet - 4H want to encourage members to learn cooking their own food as opposed to buy prepared foods. 4H also want to convey a healthy attitude towards food referring to a natural relationship with food and have knowledge of different food nutrition and its importance to our well-being. At 4H activities, preferably healthy and sound produced local food should be served.

Animal husbandry - 4H's vision is that all children and young people develop a respect for the world and understand the interactions between animals, nature and people. Therefore, it is important for 4H to be a role model for good husbandry and animal welfare (Riksförbundet Sveriges 4H, 2004).

4H farm guidelines

4H Sweden has set up guidelines for the farms, stating what is required for an approved 4H farm. The guidelines have three development steps, which to some extent include environmental and social goals, as noted below.

Step 1, which is the basic requirement for starting a farm, include such things as following the laws and regulations, how often to host activities, minimum number of animals, leadership development etc. One basic requirement is that the farms will be permeated by “4H spirit”, explained above.

Step 2 includes actively preserving native rare breeds, having an established environmental thinking (For example, engaging in active waste separation and composting), welcome study visits and have educational activities for club members and visitors, etc.

Step 3 includes working with the continuous development, education and partners. The farm should have a throughout environmental thinking (e.g. green electricity, organic animal husbandry, etc.) and do social work (e.g. collaboration with social services, schools, green care, etc.) among other things.

The Swedish versions of these documents can be found here:

<http://4h.se/insidan/ledardok/dokument/4Handan.pdf>

http://www.4h.se/doc/styrdokument_4h_gard.pdf

Appendix B: Interview questions

The following set of questions was used to guide the interviews. Different questions were used depending on the purpose of the interview, who I was interviewing, at what stage in the action research process, etc. The questions below are arranged so that the questions that came in late in the research process are at the end.

General

Tell me about your role in the organisation/your farm?

What are the opportunities and threats to 4H/your farm now/future?

4H farms

Why do we need 4H farms in society? Is there consensus about this in the organisation? Is there a discussion about this? What is the role of farms compared to other clubs?

Sustainability

What is sustainability to you? Do you think 4H farms are working with sustainability? Why/why not? What is blocking/facilitating this?

Policies

Do you know about the policies? (The vision, the 4H spirit and the farm guidelines)

What do you think about them? How were they produced? How well do they correspond to reality? Is there a discussion about them?

Communication

What communication channels are there in the organisation?

Do you collaborate with other farms? Other organisations?

How does the communication work with the national and county level?

Change

What is the interest of learning and developing among farms?

How do you get new ideas for developing the farm?

Reflection

What are your thoughts about this interview (before and after): any reflections? Did it give you any new ideas?