



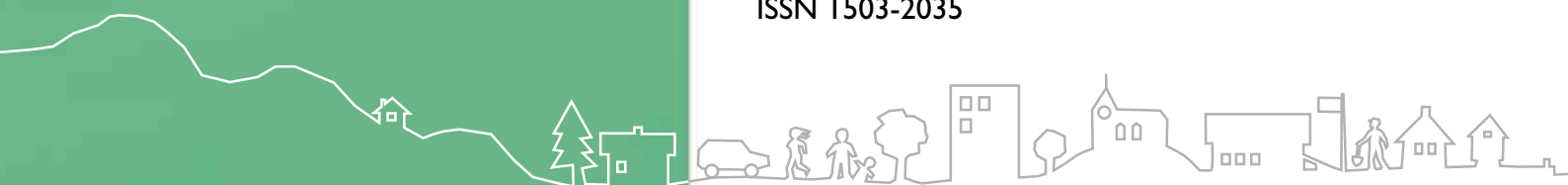
Centre for Rural Research

**Frank Egil Holm**

# **Biodiversity – enhancing schemes in the agricultural sector**

**– a comparative case  
study of the Norwegian and Scottish  
structures**

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# REPORT




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Norwegian University of Science and Technology  
N-7491 TRONDHEIM

Phone: 47 73 59 17 29  
Telefax: 47 73 59 12 75

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The similarities between the two structures are striking. Both structures rely on international deliberations when the scientific logic behind the AE-schemes is chosen. Both Norway and Scotland implement schemes that are dominated by economic measures, although informative strategies are supposed to increase the level of acceptance for the maintenance of biodiversity. Both nations have experienced some level of delegation of power (subsidiarity), and although most parties accept the need for the inclusion of the local level, there is some concern as regards the level of resources and competence at that level. The differences are connected to the two-level system of administration in Scotland compared to the three clear administrative levels in Norway. Norway seems to rely heavily on traditional bureaucratic structures, while Scotland has adopted more flexible structures where relevant NGOs and partnerships are included in the implementation of environmental efforts. This report is a slightly revised version of the cand.polit thesis "Biodiversity- Enhancing Schemes in the Agricultural Sector – a Comparative Case Study of the Norwegian and Scottish Structures".

Entry words

Biological diversity, biodiversity, multi-level governance, bureaucracy evaluation, Norway, Scotland

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## ABSTRACT

Biodiversity has become one of the most discussed themes within the framework of sustainability during the last decade. The definition of biodiversity is highly debated and could be understood in different ways. According to the most common definition biodiversity however includes: *"the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems"* (Convention on Biological Diversity 1992, article 2). This report explores how two European administrative structures have included these aspects into the administrative structures. The most important milestones in the development of an international environmental policy sector are more thoroughly presented and discussed.

The aim of this report is to assess key features of the design and implementation of environmental schemes targeting biodiversity maintenance in the agricultural sector. A further aim is to consider the administrative challenges of implementing a scientific term with global importance, biodiversity, into the national, regional and local administration of agricultural production in Norway and Scotland. Literature connected to implementation and evaluation of public policy substantiates the theoretical choices in this report. The report assesses the design and implementation of agri-environmental schemes in two European structures (Norway and Scotland) through four "analytical categories": *program theory, policy measures, horizontal and vertical relations* and adjustments at *the local level*. A qualitative approach is chosen with an extensive assessment of key policy documents combined with interviews with 13 informants in the two administrative structures. The comparative case study is chosen as a way of illuminating the key features of the implementation of AE-schemes in Norway and Scotland.

The similarities between the two structures are striking. Both structures rely on international deliberations when the scientific logic behind the AE-schemes is chosen. Both Norway and Scotland implement schemes that are dominated by economic measures, although informative strategies are supposed to increase the level of acceptance for the maintenance of biodiversity. The horizontal relations between actors at the same administrative levels seem to function quite well, as the co-ordinated efforts among agricultural and environmental parties are visible. Both nations have experienced some level of delegation of power (subsidiarity), and although most parties accept the need for the inclusion of the local level, there is some concern as regards the level of resources and competence at that level. The differences are connected to the two-level system of administration in Scotland compared to the three clear administrative levels in Norway. Norway seems to rely heavily on traditional bureaucratic structures, while Scotland has adopted more flexible structures where relevant NGOs and partnerships are included in the implementation of environmental efforts.

## **PREFACE**

This report is a slightly revised version of the cand.polit thesis “Biodiversity- Enhancing Schemes in the Agricultural Sector – a Comparative Case Study of the Norwegian and Scottish Structures”, which was accepted as a my final exam at Department of Sociology and Political Science, Norwegian University of Science and Technology, in January 2006. The process of writing a cand.polit-thesis in political science includes a large number of phases; the exciting preface where a decision on a thematic approach and a clear-cut research question is taken; the informative phase of reading literature to obtain an overview of the research topic and its implications. Then the joyful and inventive period of gathering data, and the final period of writing and analysing the findings that could be both frustrating and fabulous. Some people have meant a lot to me during one or several of these phases and deserve a specific acknowledgement for being at the right place at the right time: My mentor Marit Reitan for patient advice and constructive discussions during three years at ISS. All the colleagues at Centre for Rural Research for stimulating exchanges of relevant experience and motivation. The colleagues in Class#9 at the cand.polit-programme at ISS for interesting discussions and a few laughs. The UK BioScene team at Imperial College at Wye for crucial input on schemes and informants in Scotland. Informants at several levels and in different organizations in Norway and Scotland who have unselfishly given too much of their precious time. Thanks to all the friends who have supported me during over eight years at the NTNU, and earlier.

Anyway, the greatest acknowledgement goes to my family for being caring and supportive idols during almost three decades.

Frank Egil Holm

Trondheim, December 2006

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## **1. BACKGROUND, CONTEXT AND THE AIM OF THE REPORT**

### **1.1. Introduction**

The field of environmental policy has become an area of widespread focus in policy-making and policy-implementation during the last 50 years. The importance of sound resource management, the globalised and integrated nature of environmental problems, and several frightening disasters have all helped to define a unique policy sector with focus on the environment. The registration, mapping and maintenance of biodiversity qualities have evolved during the last 15 years as perhaps the most important remnants of the focus on sustainability in the 1980s.

*“Biodiversity conservation has received little attention in the social sciences. This may be due at least in part, to the belief that its study concerns technical matters in the physical sciences, such as the elaboration of taxonomies of ecological or site-specific species variation. However, following ratification of the CBD<sup>1</sup>, biodiversity conservation is now a legal obligation for the European Community and its member states” (Baker 2003, p 24).*

Political scientists have joined the field of environmental studies during the last couple of decades. Here the political scientist faces the challenge of saying something meaningful about how to restore, maintain or improve environmental qualities in the world. Tools like power, democracy, liberalism, radicalism, conservatism may not be suitable organising concepts in this rather new field of study. The discussion of sustainable resource management is old, and has been dominated by philosophers, geographers, economists and biologists. Thus, the field is rich on concepts, methodologies and theories, but only a few of them are normally used by political scientists. We have to accept this, and participate in the debate with an open mind. Challenges connected to the implementation of six agri-environmental schemes are presented and analysed in this comparative case study of the Norwegian and Scottish structures for administrating biodiversity issues in the agricultural sector.

### **1.2. The two cases: Norway and Scotland**

Most practical knowledge needs some kind of relational foundation. A comparison between two or more structures could thus be a tempting strategy due to the fact that the process of saying something about one phenomenon is simplified by contrasting it to a similar phenomenon. In this case, the study of the Norwegian administrative system connected to biodiversity management is improved by comparing it with one or more other structures. The

idea for this report was conceived within an EU-funded project with 7 participating countries, called BioScene<sup>2</sup>. Within the BioScene-project there were several structures that could have been chosen for comparison with the Norwegian structure. Scotland was chosen as the most feasible comparison because of the similarities in agricultural production methods, climatic conditions and administrative traditions. Differences are mainly associated with Scottish EU-membership through the United Kingdom, the higher efficiency of Scottish farming and the more dominant private ownership of Scottish land. Two local areas, Vågå/Lom in Norway and the Cairngorms in Scotland, are chosen to help the identification of relevant schemes and administrative structures for this study. Although this is a two-case study, six AE-schemes have nevertheless been identified as relevant for a study of the two cases. The six schemes will be what some have branded observational units, while Norway and Scotland represent the explanatory units (Ragin 1987, 8f). Although this work must be seen in relation to the more general developments in international and national biodiversity policies, the main aim is to uncover the ongoing processes of policy implementation in the two nations. To the best of my knowledge, no pure comparisons have been made of the two structures of Norway and Scotland with respect to the implementation of AE-schemes. Hence, the present report could provide some interesting conclusions as to how the two systems of AE-schemes are operating, and what improvements could be feasible. We cannot expect the cases of Norway and Scotland to be representative of the majority of food-producing countries in the world. The two structures could however be interesting cases as they, along with most countries in the Western hemisphere, both experience strong influence from two large international policy makers; the European Union and the World Trade Organization.

### **1.3. Aims of the report and theoretical approach**

The aim of this report is to assess key features of the design and implementation of environmental schemes targeting biodiversity maintenance in the agricultural sector. A further aim is to consider the administrative challenges of implementing a scientific term with global importance, biodiversity, into the national, regional and local administration of agricultural production in Norway and Scotland. This approach is based on a paradox that has become apparent during work with this topic: why adjust an administrative structure towards delegated governance, when the topic itself is a competence-demanding field defined by, and

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<sup>1</sup> Convention on Biological Diversity

<sup>2</sup> BioScene is a European project focusing on socio-economic and biological challenges connected to biodiversity maintenance, with case-



suited for, national and global authorities? The implementation study is chosen as the theoretical approach. Implementation studies normally see the different aspects of design, specification and implementation of *policy* as a process with a number of identifiable phases, which could be labelled *agenda-setting*, *goal-formulation*, *national specification*, *local specification*, *problem solving* and *feedback*. The six phases in a traditional implementation study are too general for an analysis based on the empirical material, thus four analytical categories are isolated and used to guide the processing of empirical material and the analytical discussion. The vast literature on implementation studies and evaluation methods is used to substantiate the four analytical categories. These categories are:

- The program theory (where the underlying logic of the general agri-environmental policies and the specific schemes is assessed)
- Policy measures (where economic, juridical and informational instruments are assessed as levers for changing damaging activities into “good farming practices”).)
- Horizontal integration/ vertical governing (where the horizontal and vertical relations between actors, agencies and organizations with responsibility for the implementation of AE-schemes are analysed) and,
- Local adjustments (where the role of the local level in these implementation processes is assessed)

The empirical material consists of key Norwegian and Scottish policy documents and interviews with informants from different levels and agencies in the two structures.

This work is of practical significance in the current debate about division of responsibilities between different administrative levels and agencies<sup>3</sup>. The theoretical significance is less obvious, as it does not develop new theoretical approaches to the theme, and does not provide any generalizations. An additional aim of this report is anyway to use the findings as a foundation for some recommendations for improving the current AE-implementing structures.

#### **1.4. The context: Biodiversity as a discussion on three levels**

The growth and implementation of biodiversity issues will be presented in three main parts. First, a presentation of the international deliberations connected to the growth and defining processes of biodiversity into a unique policy sector. Secondly, a brief introduction to the

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areas in 7 mountainous regions in Europe. ([www.bioscene.co.uk](http://www.bioscene.co.uk))

3 White Paper 31 (2000-01) "On the division of authority "

national adjustments in the Norwegian and Scottish approaches towards biodiversity-enhancement during the last 20 years is given. Finally, the study will cover the actual implementation of biodiversity issues into the regional and local administrative structures, with specific focuses on the resulting agri-environmental schemes. These three approaches are elaborated briefly in the following, and more extensively in the broader descriptive and analytical sections in chapters 3 and 4.

### ***The global context – The concepts of sustainability and biodiversity***

The notion of sustainability has been an integral part of discussions about economics, politics, trade, science and of course environmental issues since the mid-1980s. Our exploitation of resources has been an issue for centuries, but it was not until the comprehensive work that led to “Our Common Future” in 1987, that this topic was integrated into all aspects of decision-making worldwide. Here the term of “sustainable development” became the buzz-word for years, meaning: *"Humanity has the ability to make development sustainable-to ensure that it meets needs of the present without compromising the ability of future generations to meet their own needs"* (The World Commission on Environment and Development 1987, p8). Along with the Stockholm Conference 1972 and the following “The Limits of Growth” in 1972, and the Conference in Rio (1992), “Our Common Future” is one of the milestones in the development of an environmental focus in the globalised world. Nation-states, NGOs and individuals meet regularly in designated forums to improve the state of the world. Biodiversity has become one of the most discussed themes within the framework of sustainability during the last decade. The definition of biodiversity is highly debated and could be understood in different ways. According to the most common definition biodiversity however includes: *"the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems"* (Convention on Biological Diversity 1992, article 2). Since the Convention was signed and ratified<sup>4</sup>, it has been included in a wide range of statements, regulations and proclamations from all actors in the global discussion, as one of the most important challenges of our time. An aim of this report is to illuminate the way two European administrative structures have included these biodiversity-aspects into their daily practises. The most important milestones

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White Paper 19 (2001-02) "New responsibilities for the local democracy "

<sup>4</sup> <http://www.biodiv.org/world/parties.asp>

in the development of an international environmental policy sector are more thoroughly presented and discussed in chapter 3.

### ***The national policies – Adaptation of international regulations within a national framework***

National policies in different sectors normally have their origin either in top-down processes where the authorities adopt international agreements and regulations or from bottom-up processes where the state is reacting to obvious demands from the public. The sector of environmental policy-making and policy-implementation seems to be most heavily influenced by international trends and the cross-national political climate, thus pointing to a top-down approach. The international environmental milestones mentioned in the preceding section have led to national responses and debates, addressing what adjustments should be made in the national structures to fulfil international expectations. This has normally resulted in a general national statement through a White Paper, a national action plan, or more specific schemes and programmes. The focus in this report is on the Norwegian and Scottish structures, and although there are some differences between the systems, the number of similarities is even more striking. The first comprehensive Norwegian treatment of these challenges was the White Paper on Sustainable Development in 1996<sup>5</sup>, along with the White Paper on Biodiversity in 2000-01<sup>6</sup>. The most prominent UK attempt to consider these issues was The Biodiversity Action Plan in 1994. In chapter 3 we will assess how the most important national policy papers and regulations in Norway and Scotland are designed, and what challenges they are trying to counter. As we shall see, most of them are logical continuations of preceding international discourses and agreements, and rather few come from joint local and regional activism.

### ***The local implementation – Agri-Environmental schemes to maintain biodiversity in the cultural landscapes***

When the national policy-making actors have defined the crucial challenges and possible visions for environmental priorities within a country, targeted schemes with the purpose of reaching the environmental aims are designed and implemented. These schemes could either be universal (targeting large parts of the population), or more specifically aimed towards smaller groups of people in limited geographical areas. The maintenance of biodiversity

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<sup>5</sup> White Paper 58 (1996-97) "Environmental policy for sustainable development"

qualities in the agricultural sector requires a range of instruments, both general schemes that target large sections of the agricultural sector, and schemes directed towards specific areas and fringe activities. Norway and Scotland have acquired a rather similar range of structures where general payments for biodiversity-friendly methods of production are supported by economic schemes linked to area size rather than output. This seems logical due to the fact that most threats towards biodiversity in agricultural production could be countered by a more extensive and varied type of production. Four Norwegian and two Scottish AE-schemes are given extra attention in this report, as a general descriptive presentation is provided in chapter 3, along with an extensive analysis of the administrative challenges connected to the implementation of the AE-schemes in chapter 4.

### **1.5. The report**

Theoretical contributions covering the term policy, policy implementation, evaluation studies and the processual approach are presented in chapter 2. These contributions substantiate the choice of the program-theory, policy measures, horizontal integration/vertical governing and the adjustments at the local level as the analytical categories in this report. Chapter 2 also covers the methodological framework for the report with a description of the comparative case study as a way to compare two administrative systems. In chapter 3 the main concepts of biodiversity and sustainability are elaborated and agricultural-/environmental policies of the two case nations are presented. Chapter 4 is the analytic part of the report, where the empirical data from interviews and documents are used to analyse the implemented AE-schemes in light of suggested theories from chapter 2. Differences and similarities between the two cases are also pointed out. Main findings and conclusions are elaborated in chapter 5, a chapter that also offers some recommendations for future policy-making.

## 2. THEORY AND METHOD

### 2.1. Introduction

We need a theoretical point of departure for the study biodiversity management in the two structures. Policy could be seen as a collective term for all attempts to solve challenges in a society. In this section, policy is presented as “*a set of ideas and proposals for action culminating in a government decision*” (Jones et.al. 2001, pp 9 and 528). The notion of policy is further specified through a presentation of key terms connected to the implementation of the government decision. Different phases in an implementation study are identified and presented as the organizational framework for the further analytical work in this report. Four key dimensions are presented as the analytical categories in the comparison between the Norwegian and Scottish structures and these will guide the analysis in later chapters. These are the program-theory, policy measures, horizontal integration/vertical governing and the role of the local level. Then attention is turned to the methodological approaches that this report is founded on, and considerations connected to the techniques and procedures are raised and discussed. The comparative case study as a method for linking the theoretical expectations and empirical material is presented, in addition to an assessment of the validity and reliability of the empirical material.

### 2.2. Theoretical perspectives

#### 2.2.1. Policy

It is important to differentiate between the concepts of policy and politics<sup>7</sup>. One difference could be that politics refers to political processes and policy to the content of the decisions (Kjellberg and Reitan 1995, p 20). Others would say that politics is “*a process which seeks to manage or resolve conflicts of interest between people...*”, while policy is “*a set of ideas and proposals for action culminating in a government decision*” (Jones et.al. 2001, pp 9 and 528). Winter (2001, p 30) shows that there is a dynamic dialectic connection between the two concepts. Politics determines policy and policy determines politics. In this report there will be no focus on the political processes and discussions leading to formal statements. The main aim is to describe and analyse how these statements are adopted into the administrative

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<sup>7</sup> For a Norwegian this distinction is difficult, because we do not have two different words for these two terms. Both politics and policy are

structures, and to analyse how the AE-schemes are implemented.

We can expand the term policy further and say that policy:

*“... is a plan of action adopted by, for example, an individual, group, business or government. (...)Public policy can therefore be seen as the formal or stated decisions of government bodies. However, policy is better understood as the linkage between intentions, actions and results. At the level of intentions, policy is reflected in the stance of government (what government says it will do). At the level of actions, policy is reflected in the behaviour of government (what government actually does). At the level of results, policy is reflected in the consequences of the government action (the impact of government on the larger society)”* (Heywood 2002, p 400).

### 2.2.2. From policy-making to policy-implementation

The policy-implementation part of a decision can be viewed and analysed through the two most commonly-used approaches, the “decision-oriented approach” and the “process-oriented approach” (Kjellberg and Reitan 1995, p 132). These approaches are congruent with another typical distinction in the social sciences; the different angles of “top-down” and “bottom-up.”

A top-down view would focus on the content of the decisions, and how the decisions are dispersed formally down through the system. The agents at each level are neutral in terms of influence and are expected to implement what has been decided (Kjellberg and Reitan 1995, p 139ff). When a decision has been made, it would in general be implemented as intended, with only small changes during the dispersion through the structure. This is because of the lack of room to manoeuvre observed by the implementing bureaucrats. Hence, a problem could be regarded as solved when a decision based on a relevant program theory<sup>8</sup> has been made. Logical use of suitable policy instruments is often at the core of studies of this kind, and the traditional experiment is the ideal method of investigation in a scientific study of a decision-oriented<sup>9</sup> approach (Sverdrup 2002, p 29f). Although relevant if one needs an idea of a program’s impact, this approach is fairly limited if the goal is an explanation of what really fosters successful implementation. We must turn our attention to a more flexible approach; the processual approach.

A bottom-up view would focus on the implementation process, and consider the stages where

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translated to the Norwegian term “politikk” by several dictionaries.

<sup>8</sup> A program-theory consists of a solution to a given problem based on logical causal mechanisms from earlier studies (Mohr 1995, p 18).

<sup>9</sup> This could also be labelled a summative study where the main focus is to quantify the impact from the program/scheme on the outcome of interest (Mohr 1995, p 32f). Or; to what extent a tested solution has improved a defined problem in a specific sector.

external or internal factors could influence the actual outcome of the process (Kjellberg and Reitan 1995, p 153ff). Local adaptations, informal decision-making and influence by street-level bureaucrats would normally give the process a different outcome from the one expected. All actors and stakeholders could influence the direction and outcome of the process through the extensive procedure of dispersing directives, the co-ordination of responsibility and strategic deliberation. The final result of the process would therefore often differ from the initial decision. According to this approach the nature of horizontal and vertical relations between ministries, departments and directorates would be of interest. While the decision-view normally considers this relationship as static and homogeneous, the process-view would allow for a greater degree of disagreement and deliberation between the central and local agencies. Insight, understanding and learning are of great interest for this approach (Sverdrup 2002, p 32f). This process-view would also focus more on the possibility for local adaptations when a scheme is implemented<sup>10</sup>. Both Norway and Scotland (like most other countries/nations) have a local distinctiveness, which requires local adjustments of the schemes to secure effective accomplishment of the intended objectives. While a scientist in a decision-oriented study would answer “yes” or “no” when asked whether a program has worked as intended, he or she should also try to answer why this has happened, in a process-oriented approach. The aim of this report is to cover the administrative challenges in biodiversity management and not to assess whether the structure of AE-schemes has contributed to an increase in biodiversity. Thus, a process-oriented strategy will be outlined in the coming sections.

### 2.2.3. Implementation studies – from “plan of action” to phases

The study in hand is an implementation study, which assesses specific parts of the policy process. In addition to studying the implementation of Norwegian and Scottish AE-schemes, proposals for improving the current structures will also be presented. Valuable contributions could thus be found in the vast literature covering evaluation studies. Ripley claims:

*“Evaluation is, for me, a very broad concept because a great deal in the process and content of public policy is subjected to evaluation. (...) Evaluation of processes can take place at any stage. Evaluation of substantive goals and contents of a policy or program can occur. (...) evaluation of impact is desirable”* (Ripley 1985, p 142).

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<sup>10</sup> As a contrast to the summative approach in the previous paragraph, the process-oriented approach could be labelled as a formative approach. This approach could in one aspect mean impact-studies at a number of stages through the implementation of a program, or a more thorough study of the conglomerate of aspects connected to the implementation of the program (Mohr 1995, p 32f).

This study will provide an overview of the implementation process where the agri-environmental schemes decided at central level are delegated, dispersed and brought to life at lower levels in the administrative system. The ultimate evaluation would assess the impact different types of schemes have on the biodiversity in different areas. This is not feasible in this case; hence a processual study of the bureaucratic adaptation and administrative structures is of main importance. The main reason for the choice of a processual strategy, rather than performing an effect-study, is explained in the following statement:

*“...policies do not implement themselves. In assessing the chances for successful implementation, we should consider the motivations and resources of those who will manage the implementation. We should also look to mobilise potential supporters of the policy who can serve as fixers”* (Weimer and Vining 1999, p 401).

This point of view requires a deeper study of a topic than a mere summative effect-study.

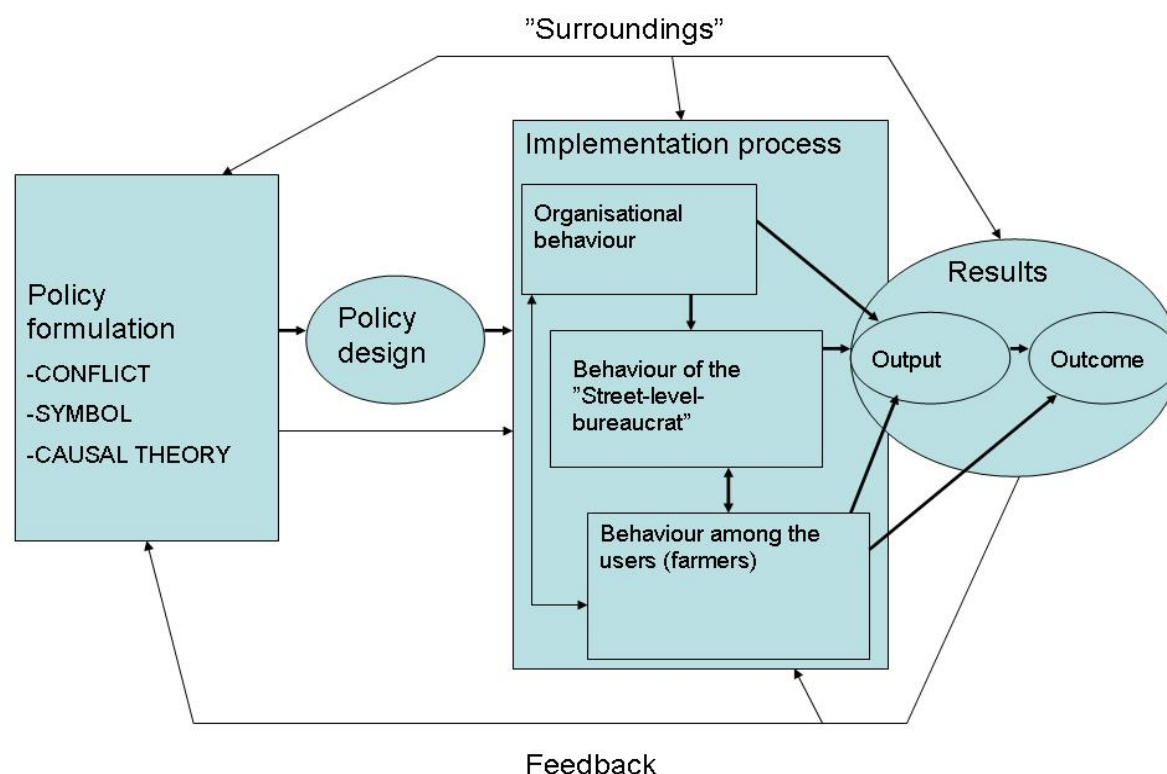
The policy-implementation process could also be described as a *“program-assembly process with control over the required program elements in the hands of relatively autonomous actors”* (Bardach 1977, p 163, 250-263). Similarly, Palumbo and Calista (1990, p 10) identify a number of stages in a policy implementation process; (1) Bring the subject of interest on to the political arena (agenda setting phase). (2) Problem identification with specification of some general or specific goals and intentions (goal formulation phase). (3) Establish a connection between the problem, where a desired improvement has been identified, and the proposed solutions to this problem. These causal connections must be rooted in previous experiences or an established program theory (program theory phase). (4) The implementation of the new policy with the spread of orders, recommendations, rules, information and other measures (national/local implementation phase). (5) The fifth, and last stage, is to evaluate the process and its results (effect and feedback phase). Ripley (1985, p 22-26) similarly divides the policy process into six sets of activities;

*agenda setting, goal setting, alternative development and selection, implementation of the selected alternative, evaluation of implementation, evaluation of results (impact).*

Winter (2001) provides us with a model that allows us to study the implementation process of an initiative more closely. The most interesting part in this type of study is the second box, the implementation process.



Figure 1: The implementation of policies:



(Source: Winter 2001, 59)

At the policy-formulation stage a problem is identified, and a desired change is defined. Suggestions about what has caused the problem are made, and underlying conflict structures and organizational/personal relations are mapped. This knowledge leads to a policy-design stage, where a combination of instruments, measures and institutional arrangements are defined to counter the formulated problem. In the implementation-process the new policy is instituted into the structure. Organizations, interest groups, stakeholders and actors are exposed to new arrangements and are supposed to change practices in the desired direction. In the last part of the process, changes are measured and registered, and an evaluation of whether the problem has been solved is made.

The AE-schemes in this analysis are relatively long-term programmes, and some level of learning and exchange of information during the process would normally be desirable. Adjustments during the program's operating time would therefore be the rule rather than the exception. Revisability is also a key aspect of a good institution (Goodin 1996). In all

program-evaluations, a conclusion as to whether the program has fulfilled its intentions is always desired<sup>11</sup>. It has already been argued that a clear-cut estimate on the numerical “effect” on biodiversity is impossible to obtain in a study like this, thus the recommendations will address potential improvements to the design and administration of future AE-schemes.

#### 2.2.4. Four important aspects in the implementation of a scheme:

The final task of this section is to equip us with some clear-cut analytical dimensions, which will be the approach in the analytical part of this report. The use of these categories will organize the empirical material into accessible and overseeable clusters of data. The first two analytical categories deal with the content of the policies; that is the (scientific) logic behind the implemented schemes, and the policy measures that are meant to force the development in a desired direction. The last two categories consider the administrative challenges connected to the management of these schemes; assessing the horizontal and vertical relations between actors and agencies and evaluating the possibilities for local adjustments to the designated schemes.

#### *The “Program-theory”*

The six selected AE-schemes were designed to solve general or more specific challenges. The logic behind the schemes is based on an understanding of some identified problems, associated with undesired activities in the agricultural sector. The link between a stated problem and a suggested solution through a range of targeted activities is called the program-theory. A program-theory consists of a solution to a given problem based on logical causal mechanisms identified in earlier studies (Mohr 1995, p 18 and Weimer and Vining 1999, p 396-401). Ideally, this theory should be based on replication logic, where the suggested solutions have been used to solve similar challenges in similar sectors with reasonable success. Or, as Bardach defined the theoretical foundation of a scheme:

*“The basic theoretical conception of the problem area must be correct to be able to implement a program successfully. A program theory often takes for granted some economical or sociological theory on how the world works. If these theories are wrong the following program is implemented on wrong foundations, and failure is a likely outcome”* (Bardach 1977, p 250-263).

The agenda-setting phase and the policy-making process would normally consist of a

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<sup>11</sup> Sverdrup argues that the first comprehensive evaluation studies based social sciences originated in the USA in the 1960s, while in Norway evaluation studies have only become common in the last couple of decades.

limitation of a given problem, a description of the main dividing lines between actors in the discourse, and finally some kind of proposed solution to the problem. Within this report the proposed solution would normally take the form of a regulation or directive made by the government or some underlying agency. We ask the following questions in order to be able to answer whether the program theories connected to the AE-schemes are reasonable:

- What program theories are the six AE-schemes based upon?
- Do the actors find the level of knowledge connected to biodiversity challenges satisfactory, to the extent that one could design schemes that target the correct challenges?

### ***Means and regulations***

A main theme in this particular field of policy studies is the study of policy measures, or policy instruments. These instruments are normally divided into three main groups (Fimreite and Grindheim 2001, p 99, Eckhoff 1983, pp29-34 and Sverdrup 2002, p 38f). Economic measures can reward or punish actors if they proceed or change certain procedures in a way acceptable to the relevant authorities. These depend on rational choices of the actors by presenting them with options within an economic frame. Desired outcomes are supposed to be reached by guiding actors into desired activities because the best activities would be most profitable. Regulatory measures define boundaries for appropriate practices in certain arenas, and would normally consist of obligations and prohibitions. Examples of the latter would be prohibition of pollution or littering, while an obligatory petrol tax would be an example of the first. Informative measures try to direct actors into certain actions by providing them with information about innovations, technological developments and other facts that are not commonly known. All kinds of informative work and actions towards attitude change are part of what Eckhoff calls educational measures. Informal measures like counselling and settlements are not binding on the integrated parties, but the measures would normally be respected by the parties. To change production practices in the agricultural sector, financial subsidies, prohibitions on damaging activity and information about appropriate production methods have all been used (Jones 1998, p 194). Sverdrup (2002) underlines the importance of combining the measures into logical packages with a blend of hard juridical/economic measures and soft informational measures. The following questions connected to the structure of policy instruments are raised:

- Are the structures of AE-schemes in Norway and Scotland dominated by economic, juridical or informative incentives?

- Do the actors find the combination of schemes suitable for the challenges they are supposed to solve?

### ***Institutional structures and level of co-operation***

The third analytical category assesses the horizontal and vertical relations between the actors and agencies with responsibilities for implementing these policies. The traditional approach has been to use classical bureaucratic channels with a downward dispersion of targets and specifications and an upward reporting of accomplishments and challenges. The bureaucracy secures a certain level of precision, consistency and efficiency from the case handlers, while discretion, predictability and stability could be offered to the people (Fimreite and Grindheim 2001, p 65). The bureaucracy is also seen as the ideal way to administer large-scale populations because it provides the decision-making with an environment of stability and predictability (Hughes et. al. 1995, p 115). The latest significant development in the discussion of the extent and purpose of a (public) administrative structure, Multi-level-governance (MLG), proposes a more flexible approach than its bureaucratic predecessors<sup>12</sup>.

The most common developments within the concept of MLG could be summarised:

*“...multi-level governance as “a system of continuous negotiation among nested governments at several territorial tiers” (...) the multi-level governance concept thus contained both vertical and horizontal dimensions. “Multi-level” referred to the increased interdependence of governments operating at different territorial levels, while “governance” signalled the growing interdependence between governments and non-governmental actors at various territorial levels” (Bache and Flinders 2004, p 3).*

The two nations share the quality of having widely diverse countrysides with geographical diversity, thus the result would be a varied system of farming types with a complex need for support schemes. We should expect:

*”that governance must operate at multiple scales in order to capture variations in the territorial reach of policy externalities. Because externalities arising from the provision of public goods vary immensely – from planet-wide in the case of global warming to local in the case of most city services – so should the scale of governance. To internalize externalities, governance must be multi-level” (Marks and Hooghe 2004, p 16). And, “...there has, judged against traditional public governing activities, been an increase in the role of government as facilitator and as co-operating partner. As such it is more appropriate to speak of shifting than of shrinking roles of the state” (Kooiman 2003, p 3).*

The program-theory in its purest form only suggests what mechanisms should be triggered to

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<sup>12</sup> Political leaders would argue for popular control of the administrative system, while the bureaucracy would say that their expertise in

solve a specific challenge connected to biodiversity maintenance. To successfully implement an effective policy, horizontal integration (HI) and vertical governing (VG) have been proposed as two crucial elements. This means that ecological considerations have to be recognised as overriding principles for policymaking on an inter-sectoral basis (HI), and that the ideal balance between different levels in the policy structure must be sought (VG) (Aall et al 2001, p 26f). Horizontal integration could be used as a concept if we want to describe the level of co-operation between actors at the same level of administration. Key questions in this respect are whether stakeholders at the same level, often with different interests, are able to work in tandem towards a common target. HI is interesting at all levels of biodiversity management, as co-operation between agencies is necessary for successful implementation, because biodiversity challenges are complex and multi-faceted. Vertical governing describes the level of co-operation between the different levels of administration. A relevant question is whether there are open channels of communication between the agencies within the same policy sector, and whether they agree about what the main challenges are. We should expect some differences according to whether these connections are defined from the top level in a bureaucratic structure, or if the structure is designed as a response to expectations from the lower levels or influences from external stakeholders (e.g. interest groups<sup>13</sup>). The principle of subsidiarity is also important as “...devolution and decentralization is not unique to the United Kingdom but is characteristic of a trend in many Western, and particularly European states” (Bache and Flinders 2004, p 100f). This means that governing of some specific type of policy only should be done at a high government level if, and only if, the lower level is incapable of producing a legitimate and effective implementation<sup>14</sup>. This is a key strategy in the Scottish structure, where: “Co-operation, collaboration and networking both vertically as well as horizontally was seen as a necessity to progress...” in the search for a prosperous future for the Scottish agriculture (Scottish Executive 2001, p 59).

*“One of the key defining features of ‘sustainable development’ is the emphasis on the integration of environmental objectives into non-environmental policy sectors. This entails a fundamental recognition that the environmental sector alone will not be able to secure environmental objectives, and that each sector must therefore take on board environmental policy objectives if these are to be achieved” (Lafferty and Hovden 2003, p 1).*

A dominating central authority should oversee the process of strategic integration, as sectoral

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administrative matters should qualify them for a great deal of self-determination/sovereignty (Niskanen 1973, p 3).

<sup>13</sup> Interest groups could be defined as: “organizations which have some autonomy from government or political parties and...try to influence public policy” (Hague et.al 1998, p 113).

<sup>14</sup> Both Norway and UK are unitary states, while Norway is rated to be slightly more decentralised than UK (Lijphart 1999, p 189). Thus we

authorities seldom will have the necessary leverage to impose environmental objectives on the decision-making of other sectoral authorities.

*“Biodiversity has been found to be under threat from sectoral problems, that is, the interplay between particular economic sectors (such as agriculture, regional policy, transport) and individual ecosystems. As such, biodiversity policy has become linked with the current emphasis on sectoral policy integration...”* (Baker 2003, p 24).

We ask the following questions in order to assess the horizontal and vertical relations within the administration of AE-schemes:

- Are the AE-schemes implemented through a traditional bureaucratic structure or through alternative organizations and networks?
- Are there integrated efforts to solve the biodiversity challenges among the agencies, both horizontally and vertically?
- To what extent are interest groups formally included in the implementation of AE-schemes targeted towards biodiversity management?

### ***The local level as a stakeholder in biodiversity management***

Winter's (2001) focus in the process-approach was the organizations, actors and stakeholders that are exposed to the new policy. His argument was that this part of the actual implementation is filled with political considerations, local adaptations and claims from stakeholders, leading to an outcome of this stage that never equals what was intended in the earlier stages of the process. If the policy design is made at the national level, it is easy to think that when this decision is implemented through several phases, it would be changed on the journey through the hierarchy.

The street-level bureaucracies are *“agencies whose workers interact with and have wide discretion over the dispensation of benefits or the allocation of public sanctions”* (Lipsky 1980, preface xi). The *“...public service workers who interact directly with citizens in the course of their jobs, and who have substantial discretion in the execution of their work are called street-level-bureaucrats...”* (Lipsky 1980, p 3). Examples of street-level bureaucrats are teachers, police officers and health workers, but more relevant for this study, workers in the local farming administrations. The main question here would be whether the street-level bureaucrats have some kind of elbow room to influence the implementation of schemes reflecting local diversities. The notion of “fixers” also comes into consideration as they have

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should expect strong national/central influence in the policy-making, and policy-implementation stages.

the knowledge of what strings to pull to get a desired response (Weimer and Vining 1999, p 396-401).

Since World War 2 the size of the bureaucracy in Western societies has increased dramatically due to the growth of welfare services. An ever-present political debate over the bureaucracy's budget and staff is a recognisable hallmark of a democracy. Additionally there is a conflict over the interactions with the citizen, due to the fact that the street-level bureaucrats have enormous potential for influencing an individual's everyday life. A street-level bureaucrat may be seen as an opponent of the people in difficult matters, by being a conservative, rigid and uncooperative civil servant, while he or she in other cases can be seen as someone capable of grasping the need of the people and defending it against an ignorant bureaucracy (Lipsky 1980, p 8f). A general tendency is for all possible means to be taken to secure the interests of the local level, both individual and community concerns (UNEP 1995, p 37<sup>15</sup>). This is a trend continued through the 1990s with a focus on subsidiarity and devolution of power in sectors susceptible to new responsibilities.

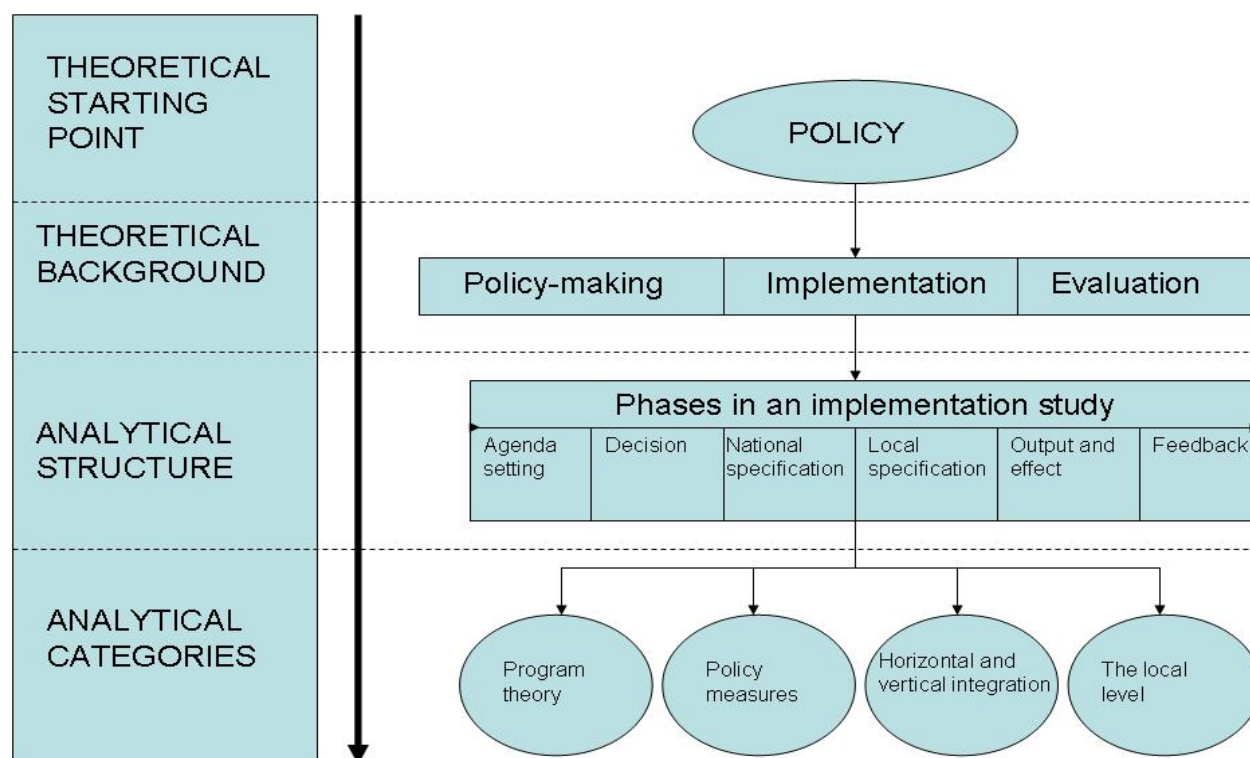
The local level is supposed to play an important part in the implementation of biodiversity issues, and we ask the following questions with an aim to assessing the role of the local administrators and users:

- What adjustments are made locally? Do local bureaucrats exercise some level of discretion?
- Does the local level possess the necessary level of resources and competence to be able to take an active role in the solving of biodiversity challenges?
- Has the local level been given the appropriate administrative tools to be able to meet the expectations of the local authorities as a visible and significant actor in the implementation of policies?

#### 2.2.5 Theoretical model

Figure 2 summarises the theoretical approach in the present report. The direction of the arrows linking the different concepts in the model relates to the preceding theoretical discussion, a journey from the general concept of policy to four clear-cut analytical categories.

Figure 2: Theoretical model for the implementation of AE-schemes:



The starting point was the notion of policy. Policy was discussed through the approach of the implementation study where specific phases in the implementation process were identified. Six phases were seen as crucial from the establishment to the finalisation of the implementation of a scheme, though seen as too general for the purposes in this report. Four key aspects were isolated as the analytical core in this report, thus the empirical material will be analysed with specific focus on the program theory, policy measures, horizontal/vertical relations between the key actors and the adjustments made at the local level. The focus will now turn to the methodological challenges of this study. Different strategies are discussed in order to find a method to gather and organise the empirical material, which will illuminate the theoretical questions presented in the previous sections.



## 2.3. Methodological choices

### 2.3.1. Methodological approaches in this report

This is a comparative study of two administrative structures designed to implement agri-environmental schemes. The key features of the two structures are examined within an implementation analysis structure, mainly based on qualitative empirical data. Some aspects of the strategies and use of the comparative case study and qualitative data are discussed in the following.

*“A key feature of research and analysis on social problems over the past 40 and more years is the growing recognition of complexity (...) The methodological core of policy analysis today can be broadly characterised as a form of critical multiplism. The basic methodological injunction of critical multiplism is triangulation. If analysts seek to improve policy-relevant knowledge, they should employ multiple perspectives, methods, measures, data sources, and communications media” (Dunn 1994, p 6).*

It was outlined in chapter 2 that the logic behind implementation studies provided a theoretical entrance to the study of the design and administration of AE-schemes. More important in this part of the present report are the methodological aspects that implementation studies supply. Norway and UK (Scotland) are the two cases in this study, although Vågå/Lom (Norway) and the Cairngorms (Scotland) provide us with specific regional/local structures for assessing the implementation of schemes. Case-study research along with the key features of the comparative study is therefore important as methodological approaches when the target is to illuminate the implementation of AE-schemes. The material used to throw light on the implementation of AE-schemes is mainly of a qualitative nature (interviews and documents), and key features of qualitative research will also be presented in this chapter. In the following the key logic behind the comparative case study and the nature of qualitative data is presented and discussed.

### 2.3.2. The comparative case-study

#### ***The case study***

The aim of this report is to assess key administrative challenges connected to the implementation of AE-schemes. Two strategies could be followed. The first strategy would be to describe a large number of structures and schemes, while the other strategy would be an in-depth study of a relatively small number of incidents. Here the latter strategy has been chosen. A limited number of cases (two) and schemes (six) are assessed in an attempt to isolate the key features of policy implementation of Norway and Scotland. Thus, a case study strategy

must be the guideline for this work.

*“Case study is a familiar term but, in sociology at least, case studies have in recent years been used more than they have been written about” (Platt 1988, p 160). Platt claims that the phenomenon of “case study” has an array of meanings, including sociological approaches with observational studies of a single group, political science approaches with single case studies (as opposed to studies of a number of cases which would require comparative approaches), a psychologist’s approach where a case study presents and interprets detailed information of a single subject, to the anthropologist’s exploration of an event that represents a general theoretical principle (Platt 1988, p 161ff). “The case study is almost synonymous with the descriptive type of research (...and) is the method of choice when you want to obtain a wealth of detail about your subject. (...) The case study is therefore appropriate when you are trying to find clues and ideas for further research” (Simon 1969, p 276).*

Yin (2003, 13f). defines a case study by five points to show that an inquiry of this kind:

- *investigates a contemporary phenomenon within its real-life context, especially when*
- *the boundaries between the phenomenon and context are not clearly evident.*

The inquiry also:

- *cope with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result*
- *relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result*
- *benefits from the prior development of theoretical propositions to guide data collection and analysis.*

The present cases are contemporary because they are parts of a current debate that to a large extent affects the everyday life for some groups in the society. A large number of direct and indirect variables could have effects on both the context and the phenomenon. It is impossible to identify specific variables that have a single causal effect on the phenomenon. Here, documents and interviews have been used as sources to assess the implementation of agri-environmental schemes, and therefore fulfil the desire for a triangulation of data. A selection of relevant literature has guided the collection of data and the analysis of the two cases. Yin suggests that a case study should be carried out when the investigator has a “how” or “why” question about some sets of events, over which the investigator has little control (Yin 2003, p 9). The main question in the present report is how agri-environmental schemes are implemented in Norway and UK, hence a case study design should be relevant for this

investigation. The two cases (AE-structures of Norway and Scotland) should contribute in two ways; both logically as provider of formal input into the argument, and rhetorically as material for the presentation of the argument (Platt 1988, p 160). The Norwegian and Scottish AE-structures thus provide the descriptive essence for this study, while they also serve the purpose as exemplary input when the analysis and conclusions connected to the practical implications of the theoretical expectations are made.

### ***The comparative study***

*Virtually all empirical social research involves comparison of some sort. Researchers compare cases to each other; they use statistical methods to construct (and adjust) quantitative comparisons; they compare cases to theoretically derived pure cases; and they compare cases' values on relevant variables to average values in order to assess covariation. Comparison provides a basis for making statements about empirical regularities and for evaluating and interpreting cases relative to substantive and theoretical criteria* (Ragin 1987, p 1).

Ragin's (1987, p 5) main argument is that a comparative study should be defined by its distinctive goals, rather than a basis concentrating on special data or types of data. At least two main goals could be identified; the goal of explaining and the intention of explaining macro-social variation. The goal of this study is as Ragin states: "*identifying the similarities and differences among macro-social units (Norway and Scotland). This knowledge provides the key to understanding, explaining, and interpreting diverse historical outcomes and processes and their significance for current institutional arrangements*" (1987, p 6). The next chapter will present the historical developments and structural framework under which the current AE-schemes have evolved. Chapter 4 will study the administrative deliberation, which has had an influence on the appearance of the AE-schemes operating today. By comparing two similar systems, distinctive characteristics of the macro-social units of Norway and Scotland will be more evident, than if one only had obtained a single-case presentation of Norway. This is a two-case study, though six AE-schemes have nevertheless been identified as relevant for a study of the two cases. The six schemes will be what some have branded observational units, while Norway and Scotland represents the explanatory units (Ragin 1987, 8f).

*"On the whole, comparative studies of big structures and large processes yield more intellectual return when investigators examine relatively small number of instances. That is not because of the intrinsically greater value of small numbers, but because large numbers give an illusory sense of security"* (Tilly 1984, p 77).

### ***The comparative case-study***

The main reason for choosing two or more cases is that the investigator would get a more

robust picture of possible causes connecting reasons (independent variables) to actions (dependent variable), through a replication logic. Yin (2003, p 47) claims that the logic of a multiple case study is to select cases that either predict similar results or predict contrasting results for predictable reasons. Two cases (implementation of schemes in two countries) are contrasted in the present report:

*“Even if you can only do a “two-case” case study, your chances of doing a good case study will be better than using a single case design. Single case designs are vulnerable if only because you will have put “all your eggs in one basket.” More important, the analytic benefits from having two (or more) cases may be substantial” (Yin 2003, p 53).*

Distinctive characteristics of the two administrative systems are discussed in the light of analytical categories presented earlier in this chapter; the program theory, institutions, means and regulations and the role of the local level. In each analytical paragraph in chapter 4, these dimensions are discussed with respect to the Norwegian structure and compared with the corresponding solutions in Scotland.

*“Only in building better theories by means of comparisons (...) will we manage to shift that curve of theoretical return from finer comparison. In a distant future, we can aim to have theories of large-scale social processes sufficiently precise that a well-measured chunk of a single region’s experience will provide strong proof of a theory’s validity or invalidity” (Tilly 1984, p 144).*

### 2.3.3. The production of qualitative empirical material

Qualitative studies like this focus on a deep analysis of a limited part of the society, while quantitative studies pay more attention to whether a characteristic is widespread, and its significance in the explaining of connections between variables. Quantitative methods are based on post-positivist approaches where an objective social reality could be measured and observed, while qualitative methods are based on subjective constructions of perceptions and cognitions. One could also say that quantitative data are expressed as numbers, while qualitative data are presented as text. Qualitative studies have two basic principles. First, they are based on a holistic evaluation of the reality where each isolated instance is viewed as a part of the bigger picture. Second, qualitative studies are based on a subject-to-subject relationship between the researchers and his/her informants and this leads to a dynamic two-way process of information gathering during a project. In quantitative studies, one unit is totally irrelevant in the bigger picture, and the relationship between researcher and informant could be described as a subject-object-relationship (Thagaard 1998, 16f).

*It is important to understand that the interpretive explanation of qualitative analysis does not yield knowledge in the same sense as quantitative explanation. The emphasis is on illumination, understanding, and extrapolation rather than causal determination,*

*prediction, and generalization* (Patton 1990, p 424f).

A high level of credibility is required in qualitative studies and can be achieved through three elements; (1) the gathering of high-quality data that is carefully analysed, with attention to validity, reliability and triangulation, (2) the credibility of the researcher and (3) fundamental belief in naturalistic inquiry, qualitative methods, inductive analysis and holistic thinking (Patton 1990, p 461f).

The empirical material, or data, consists of the different pieces that are fitted together in order to analyse the analytical categories that were presented in an earlier section in the report. “*In policy research, almost all likely sources of information and data fall into two general classes: documents and people.*”(Bardach 1974 in Weimer and Vining 1999, p 297). Document research includes the review of theoretical and empirical literature, while field research would gather original primary data through interviews or surveys (Weimer and Vining 1999, p 297). Each case analysis includes all the interview data, the observational data, the documentary data, impressions and statements of others about the case, and data over time – in effect, all the information one has accumulated about each particular case goes into the case study (Patton 1990, p 385f). Weimer and Vining (1999, p 305) “defines” field research as “*talking to people, gathering raw data, or finding unpublished reports, memoranda, or other organizational documents.*” One must agree with Thagaard (1998, p 12) that qualitative studies always are based on some kind of interpreting of texts. The text could be official documents, correspondence between actors, minutes from observations or transcripts of interviews. Yin (2003, pp 97-107) has three principles of data collection. The principle of *triangulation* relies on the strength an investigation would possess if it were based on a broad range of sources. The second principle is related to the reader’s opportunity to critically inspect raw data. The last principle is to maintain a chain of evidence. The reader should be able to follow the entire line of evidence from the initial question to the final conclusions. The report aims to fulfil these principles by using several sources of information (documents and interviews), by providing the reader with references to my sources (and supplementary notes), and by presenting an argument through an open journey from theoretical expectations to analytical findings based on the empirical material.

During the process of working with this report, a wide range of civil servants and other agents connected to the implementation of AE-schemes in Norway and Scotland have been interviewed. The main purpose for this has been the assumption that documents alone would

not provide an overarching view of how the schemes are implemented into the administrative structure. Weimer and Vining (1999, p 308-310) suggest that many interviews could be carried out by e-mail or telephone, but I feel that a certain level of “closeness” could only be achieved in a face-to-face sitting, thus this strategy has been chosen. In Norway, interviews with objects connected to the three main administrative levels have been conducted. In April 2003 talks were held with several informants in Vågå/Lom, and among these were the heads of the local farming offices. I interviewed informants in the Ministry of Environment (MD), Ministry of Agriculture (LMD) and the Norwegian Agricultural Authority (SLF) in Oslo in June 2003 to get a view of the implementation of the schemes on the national level. The regional level was covered in September 2003 with interviews with representatives from the environmental (FMVA) and agricultural (FMLA) sections of the County Governor in Oppland. The present author also participated at the BioScene stakeholder meetings in Vågå in November 2003 and November 2004. Six interviews were conducted with helpful informants in Scotland in November and December 2003. Delegates from the local SNH-office (Scottish Natural Heritage), the National Park Authority and the local FWAG (Farming and Wildlife Advisory Group) in the Cairngorms were interviewed, along with SEERAD officers (Scottish Executive Environment and Rural Affairs Department) in Inverness (regional) and Edinburgh (central). The field trip to Scotland was completed with a meeting with the NFUS (National Farmers’ Union Scotland) head office in Edinburgh.

All informants were identified and selected through their direct or indirect connection with the BioScene-project, and key gatekeepers in the administrative structures were used to identify relevant interview objects. Appointments for time and location of the interviews were done by telephone 1-2 weeks before the meetings took place, and additional information about the background of this study was provided by e-mail on request. The interviews were in most cases made in the interviewee’s office, although one interview in Oslo was done outdoors and one interview in Aviemore in a local pizzeria. All interviews were guided by an interview guide (see appendix 2), thus the interviews had a similar framework and were carried out in a fairly coherent manner. All interviews (except one) were tape-recorded to assist the further treatment of the material, and all informants gave permission for this recording.

There is a need for as much empirical data as possible to uncover the processes connected to the implementation of AE-schemes. The preceding sections have shown that the universe of material we could use to illuminate this approach is virtually unlimited. However, the

following empirical sources are essential in this study:

- Official statements that say something about targets and guidelines for the implementation of the AE-schemes
- Interviews with bureaucrats at the central level, who have been part of the process of shaping guidelines for the regional and local levels.
- Interviews with regional and local bureaucrats and administrators, who have knowledge of local adjustments to national guidelines and a responsibility for reporting local developments.

#### 2.3.4. Reliability and Validity

When data are gathered to provide material to answer questions or verify/weaken hypothetical statements, the quality of the data must be discussed and assessed. We often talk about reliability and validity in this respect. The reliability of some data says something about the trustworthiness of the gathered data (Hellevik 1991, p 103). Simon (1969, p 24f) uses the words consistency or repeatability to describe the concept of reliability. The same selection of data should yield the same conclusion every time when answering the same question, to have high reliability. The validity of some empirical material says something about the relevance it has for answering the question(s) raised in the theoretical part of the report (Hellevik 1991, p 103). If empirical material is used to assess some matters that it has little bearing on, the data's validity may be low. If the answer given by the research is likely to be sound, it is said to be valid (Simon 1969, p 24f). Some would argue that the notions of reliability and validity of empirical material are more relevant in quantitative oriented studies than in a qualitative study. Thagaard (1998, p 179f) and Lincoln and Guba (1989) operate with the notion of trustworthiness when qualitative empirical material is used. Demands connected to credibility (whether the informants accept the interpretation of the material they have produced), dependability (whether the conclusion in the study actually is based on the selected material), transferability (whether the study is relevant for other situations and contexts than what has been studied) and confirmability (whether the study shows reliable use of sources and temperate interpretation of the material).

The main source of information in this report consists of a range of official policy documents. It should be borne in mind that these documents are written by people, who have been through a process of selecting the topics, focuses, data and inferences in the documents. They are therefore an interpretation or construction of the reality, and not a perfect, reflected and

unbiased presentation of the policy field. The person or group producing these documents has their own agendas, political/administrative preferences, positional interests and future needs. This is potentially a threat to the reliability of the empirical foundation because we often regard these “official” documents as factual presentations in no need of critical examination. The validity is threatened if the researcher stretches the implications of a finding in a public document to make some inferences about another connected field of study. Material from interviews with a range of official staff members is the other main empirical source for this discussion. These interviews are transformed into transcripts in order to provide more accessible material during the writing process. There are a lot of pitfalls connected to the gathering of data through interviews, with respect to the reliability, validity or trustworthiness of the empirical material. When people are asked questions about different aspect of their working day, we should expect their answers to be somewhat biased. The respondents have been guaranteed some level of discretion, but their specific position would imply that total anonymity could not be guaranteed. This would normally lead to a rather qualified directness in their answers, and a total picture of all aspects of the administrative structures cannot be made. This is a clear threat to the reliability criteria. One advantage in this respect is that the interviews mostly have been with informants based on their position in a relevant policy-implementing agency; hence their personal connections and relations are less important. One disadvantage of their professional position is that they express their feelings and meanings with caution and in a professional manner, and points of view contradicting the accepted view in their agency would normally not arise. One observation made during the process, was that these networks are quite transparent and the risk that someone could deduce who the informants are based on the selection of agencies and the nature of questions is therefore present. All interviews (except one) were taped, and the informants were given the opportunity to stop the tape if they wished to make a statement that would not be attributed to them at a later stage. This wish was of course accepted.

## **2.4. Summary**

This chapter has served two purposes. First, theoretical expectations towards the implementation of AE-schemes have been identified and discussed. From a general discussion on key elements in the implementation study the following analytical categories were isolated; the program theory, policy measures, horizontal integration/vertical governing, and the role of the local level. In a qualitative study like this, the aim is to assess to what extent



the analytical categories could be said to be key features of the development of the administrative systems through a more thorough analysis of two cases. Second, methodological considerations towards my strategy for illuminating these theoretical questions have been presented. The comparative case study was chosen as a way of illuminating the key features of the implementation of AE-schemes in Norway and Scotland. I have presented some criticism of my empirical material, through an assessment of validity, reliability and ethics. This work has left us with theoretical contributions and methodological choices that will guide the analytical discussions in the following chapters.

### **3. FROM SUSTAINABILITY TO AE-SCHEMES - AN EMPIRICAL DISCUSSION**

#### **3.1. Introduction**

The preceding chapter provided us with a theoretical point of departure. The concept of policy was introduced, and the argument for a processual implementation study approach was made. This resulted in four key analytical dimensions, which will guide the analysis of the AE-schemes throughout this report. Now attention will be turned to the development of biodiversity management as a policy area, from the international deliberations concerning sustainability and biodiversity to the ultimate structure of AE-schemes that are currently being implemented into two European countries. This material will be presented in three clusters; the international setting, the national framework and the local implementation of AE-schemes.

#### **3.2. The concepts of sustainability and biodiversity – two international discussions**

The concepts of sustainability and biodiversity have been part of the scientific literature for decades. The related concept of the cultural landscape is even older. This is however not a discourse study of the origin, development or current use of these concepts, and this will not be further elaborated. The starting point and some key milestones, where these concepts were introduced into political debate over to environmental challenges, will be presented. The main focus is on the last 30+ years, with emphasis on the milestones of the Conference in Stockholm (United Nations Conference on the Human Environment) in 1972, The World Commission on Environment and Development (“Our Common Future”) in 1987 and the Conference in Rio (United Nations Conference on Environment and Development) in 1992, where these concepts became integral parts of the environmental debate.

With the industrial revolution from around 1750 and onwards, human activities became global, because of large-scale production and reduced distances through a more effective transportation system. This development increased production rates dramatically and the Western hemisphere enjoyed a significant improvement in the range of goods and standards of living, a trend that has persisted continuously until today<sup>16</sup>. The main disadvantage of this development is that disasters today will normally affect more people than some centuries ago. Thus challenges connected to resource management, land use, food security, overpopulation

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<sup>16</sup> For a comprehensive presentation of societal adjustments during the history of mankind see Lenski et.al. (1995) “Human Societies”

have become relevant for larger segments of the people in our world. It is impossible to set a single event, milestone or date for a global discussion of environmental challenges. Anyway, I choose to use Rachel Carson's "The Silent Spring" from 1962 as the starting point<sup>17</sup> for a brief discussion of international deliberations on environmental challenges. "The Silent Spring" presents the obvious problems of the use of pesticides (mainly in the USA), and shows how dangerous substances are when they gather in the food chain. According to Carson, the loss of several bird species has been caused by the intensive use of pesticides. Over the years, Carson's claims have been supported by a range of studies and this was one of the first global processes where scientific studies of the natural world led to a global debate and subsequent changes within resource use and treatment of global resources. Combined with famines, the disasters of Chernobyl, Bhopal and Exxon Valdez, a specific field of study has been established, which we could call "environmental policy". A policy field normally includes a range of actors that over time develops a structure/network of stakeholders. They have an interest in this field either as persons exposed to an environmental problem or as holders of solutions to these problems. Recognisable procedures for dealing with these challenges would emerge as predictable patterns and lay the foundation for future solutions to new challenges. The first visible presentation of the global network of this policy field was the Stockholm conference<sup>18</sup> in 1972. Although environmental challenges had been discussed in other forums, this was the first conference that included most of the significant actors within this field. There was a significant increase in discourses, agencies and institutions after this conference, as all parties saw the need for formalised structures to discuss the developments.

### ***Sustainability***

The first concept to be elaborated here is sustainability. The maintenance of biodiversity in farming areas is important with respect to the long-term exploitation of resources, and requires a reflected view towards principles of sustainability when the direction forward is discussed. A miscalculation of the level of, and/or method of, exploitation could lead to irreversible damage to natural resources and a cautious approach is thus important. One could argue that "The Limits to Growth" (1972) and "Our Common Future" (1987) have been two of the most influential studies of environmental challenges in "modern" times. "The Limits of

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<sup>17</sup> In his comprehensive presentation "A Companion to Environmental Thought" Peter Hay also identifies Carson's "The Silent Spring" as a natural starting point for modern environmental thought (Hay 2002, p 16).

<sup>18</sup> The United Nations Conference on the Human Environment

Growth” and the contemporary UN conference in Stockholm, which focused on challenges connected to food production, pollution and consumer goods, have been credited with placing resource exploitation high on the international agenda. These challenges are viewed in a pessimistic manner, with a focus on the looming crisis that is a result of our over-exploitation of resources. “Our Common Future”<sup>19</sup> was a result of a UN initiative on the establishment of environmental strategies for achieving sustainability. The term sustainability became a familiar term for everyone, and the report concluded that ecology and economic growth are mutually dependent factors in a system where economic growth could be achieved without environmental degradation (Grepperud 1998). The Commission on Sustainable Development (CSD)<sup>20</sup> was established in 1992 to follow up the prioritised areas in the United Nations Conference on Environment and Development (UNCED) earlier the same year, and has on several occasions underlined the importance of a cautious type of agricultural production, to promote a sustainable development.

A UN report from 1997, described the follow-up processes of chapter 14 of Agenda 21 founded in Rio 1992<sup>21</sup>. The main aims here were to increase food production and to enhance food security. The World Food Summit was seen as a strong indicator of positive activity towards the achievement of these overriding targets. Economic incentives were further promoted to guide sustainable agricultural practices, education and information exchange, development and transfer of new technologies and sound natural resource management. In OECD countries a desired change from regulatory measures to economic instruments had been witnessed, e.g. environmental charges discouraging farmers from using pesticides. Most countries accepted the need for integration of environmental concerns into agricultural policies, due to the need for environmentally sensitive production and harvesting methods. Reciprocal relations between formal and informal institutions to promote a broad legitimacy in decision- and policy-making processes are seen as vital: *“It is now understood that coalitions and networks must be formed to assist the process of consensus-building”* (UN 1997).

The level of food production has steadily increased during the last decade; hence the problems of overpopulation have become less evident. Priorities have shifted towards challenges

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19 The Brundtland Report – The result of the work by the Brundtland-Commission

20 <http://www.un.org/esa/sustdev/csd/csd.htm>

21 Promoting sustainable agriculture and rural development (SARD)

connected to food security, poverty and land degradation. (UN 2001) The report further underlines that good governance and collective action have been core principles for decision-making processes during the last decade. The forming and inclusion of regional and sub-regional bodies to support the restructuring and decentralization of rural institutions have also been key features.

The last meeting of global scale considering sustainability objectives was the World Summit on Sustainable Development in Johannesburg in 2002. This was the 10-year follow-up of the Earth Summit in Rio, and the aim was to define instruments to fight global poverty, reach ecosystem security and to set timeframes for the implementation of Agenda 21. Most observers would agree that these targets were not reached, but statements connected to the continuation of the commitment for the promotion of sustainable development were delivered. In addition, the community of NGOs worked more efficiently than ever (Von Frantzius 2004, pp 467 and 472).

### ***Biodiversity***

Biodiversity as a concept came into scientific and political discourses during the 1980s. The first comprehensive treatment of the topic took place at the Rio conference in 1992, where the Convention on Biodiversity was presented with suggestions for improvements. This work continued during the 1990s, and major conferences were repeated in New York (Rio+5 in 1997) and Johannesburg (2002). Forums initiated by the UN have been the main arenas for a comprehensive treatment of the complex issues connected to biodiversity.

Hannigan (1995, p 146-161) describes the agenda setting of “biodiversity loss” as the result of long-term work by a handful of idealists. Biodiversity loss does not rely on single issues that have raised public awareness, unlike the hole in the Antarctic ozone layer and the Black Forests in Central Europe. The field of interest has developed through a number of studies “*which have cumulatively raised the alarm bells.*” This “rainforest mafia”<sup>22</sup> chaired a number of seminars and conferences and finally presented biodiversity as a crucial priority area to the UN Conference in 1992. An actor trying to propose biodiversity loss as a serious threat to

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22 The origin of the widespread use of the term biodiversity was the National Forum on BioDiversity in September 1986, where sixty leading scientist in a number of professions met in Washington. The organiser, Dr Walter G. Rosen, was the one to introduce biodiversity as an organising concept in these discussions. Along with Paul Ehrlich, Peter Raven and E.O. Wilson, Rosen could be included in the “rainforest mafia”

mankind faces three daunting tasks; (1) identifying an opponent that can galvanise public opinion towards a demand for improvement, (2) legitimizing the fact that biodiversity loss influences the daily lives of inhabitants in First World nations, and (3) illuminating the collective benefits of a world/community that is taking action. Unilateral efforts were already being taken to protect endangered species in the 1970s, while multilateral efforts were difficult to achieve. An International Convention on Biological Diversity was proposed in 1974, and the work with this Convention was formalised in the early 1980s. The work came to a temporary conclusion in 1992 with the Global Diversity Strategy; produced by the United Nations Environment Programme, the World Conservation Union and the World Wildlife Federation. To enable these requirements to be carried out, a Convention on Environment and Development was put forward to the UN Conference in Rio in 1992.

In Europe the concern of threatened habitats and their species was recognised as early as the late 1970s, with the signing of “The Convention on the Conservation of European Wildlife and Natural Habitats” (Bern Convention), where one can read that the Convention is:

*“Recognising that wild flora and fauna constitute a natural heritage of aesthetic, scientific, cultural, recreational, economic and intrinsic value that needs to be preserved and handed on to future generations; Recognising the essential role played by wild flora and fauna in maintaining biological balances; Noting that numerous species of wild flora and fauna are being seriously depleted and that some of them are threatened with extinction; Aware that the conservation of natural habitats is a vital component of the protection and conservation of wild flora and fauna”* (The Council of Europe 1979, Preamble).

Both Norway and UK signed at the outset in 1979, and the total number of accessions and ratifications has grown to 45 over the years.

Biodiversity became one of the buzzwords of the 1990s, and could mean: “*living things in their infinite variety, including genetic variation within species*” (Marren 2002, p 254). Some have argued that there are two global environmental challenges at the moment, biodiversity and climate change, and that the latter is dominating the scientific and policy agenda (Perrings et al 1995, p 1f). They proceed by saying that:

*“Extraordinarily little is known, for example, about even the existing diversity of species. Estimates of the total number of species on the planet range from five to one hundred million, of which less than one and a half million have been described, let alone analysed for their economically interesting properties.”*

The Rio summit in 1992 gave the following explanation of the importance of biological diversity:

*“This diversity is often understood in terms of the wide variety of plants, animals and*

*microorganisms. So far, about 1.75 million species have been identified, mostly small creatures such as insects. Scientists reckon that there are actually about 13 million species, though estimates range from 3 to 100 million (...) Yet another aspect of biodiversity is the variety of ecosystems such as those that occur in deserts, forests, wetlands, mountains, lakes, rivers, and agricultural landscapes. In each ecosystem, living creatures, including humans, form a community, interacting with one another and with the air, water, and soil around them.*" (The Convention on Biological Diversity - CBD)<sup>23</sup>

The CBD called for a range of measures *"...including the integration of biodiversity policies and the development of national strategies; the establishment of monitoring mechanisms: in-situ conservation: and the conservation and sustainable use of biodiversity resources"* (Baker 2003, p 26). Baker identifies two major phases of the post-CBD EU Policy on Biodiversity. The period ranging from 1993 to 1998 is dominated by ad hoc responses to the CBD, where biodiversity was dealt with under the rather general Fifth Environmental Action Programme, and the most visible actions were regulatory and finally led to the design of Natura 2000 based on the prescriptions in the 1979 Birds Directive and 1992 Habitats Directive. The period from 1998 and onwards shows a more strategic response to the CBD, through the four themes in the Biodiversity Strategy: conservation and sustainable use of biological diversity; sharing of benefits arising out of the utilisation of genetic resources: engaging in research, monitoring and exchange of information; focusing on education, training and awareness. In addition, special environmental units have been established in all other Directorates General<sup>24</sup>. The relation between agricultural modernisation, landscape maintenance and biodiversity is also accepted through the development of strategies for the inclusion of new member states in East and Central Europe (2003, p 29-33).

One of the central follow-ups to the Rio summit was the "Global Biodiversity Assessment" published by UNEP (United Nations Environment Programme) in 1995, where key problem areas, underlying causes and possible solutions were discussed. The main problem was not the numerical extent of biodiversity loss, but that the rate at which humans were altering the environment is unprecedented in human history. It noted that:

*"loss of biological resources and their diversity threatens our food supplies, sources of wood, medicines and energy, opportunities for recreation and tourism, and interferes with essential ecological functions such as the regulation of water runoff, the control of soil erosion, the assimilation of wastes and purification of water, and the cycling of carbon and nutrients"* (UNEP 1995, p 2).

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<sup>23</sup> <http://www.biodiv.org/doc/publications/guide.asp>

<sup>24</sup> DGs equal the Norwegian "departement" and the UK "ministry".

One of the most interesting channels for progressive maintenance of valuable landscapes is the “European Landscape Convention”, which opened for signatories in 2000, and came into force in 2004.<sup>25</sup> The aim of the Convention is to:

*“...encourage public authorities to adopt policies and measures at local, regional, national and international level for protecting, managing and planning landscapes throughout Europe. It covers all landscapes, both outstanding and ordinary, that determine the quality of people’s living environment. The text provides for a flexible approach to landscapes whose specific features call for various types of action, ranging from strict conservation through protection, management and improvement to actual creation (...) The Convention proposes legal and financial measures at the national and international levels, aimed at shaping “landscape policies” and promoting interaction between local and central authorities as well as transfrontier cooperation in protecting landscapes. The Council of Europe intergovernmental committees will be supervising the convention’s implementation”<sup>26</sup> (The Council of Europe 2000).*

The preceding sections show that the United Nations, The European Union and The Council of Europe are visible agenda setters, as the work of these institutions has led to the delineation of a policy field through the establishment of biodiversity as something more than a narrow scientific concept.

### **3.3. Sustainability and Biodiversity as an even more important part of national policies**

National policies are normally created as a result of one of two reasons; either as a response to international trends, demands or agreements, or as a result of discussions, developments or deliberations within the regional or local arenas within the nation state. Environmental policy is often a complex matter that is scientifically based, hence only a few actors or groups have the resources to provide well-founded and reliable arguments when policies are shaped. Large international bodies, agencies and groupings tend to have greater potential within this field than local actors, through the level of resources, finances, people and competence. Biodiversity may be one of the more complex issues in the current political world, thus large actors dominate the debate. The nation states adopt these trends and discussions, thus the influences in these issues are more dominated by international deliberations than local

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<sup>25</sup> Ratified and accepted in Norway, but not in the UK

<http://conventions.coe.int/Treaty/Commun/ChercheSig.asp?NT=176&CM=8&DF=21/05/02&CL=ENG>

<sup>26</sup> <http://conventions.coe.int/Treaty/en/Summaries/Html/176.htm>



interests. Milestones in the national responses within the field of sustainability and biodiversity in Norway and Scotland are elaborated in the following, through a presentation of key debates and policy documents. The first comprehensive Norwegian treatment of these challenges was the White Paper 58 (1996-97) on Sustainable Development along with the White Paper 42 (2000-2001) on the administration of Biological Diversity. The most prominent UK attempt to consider these issues was The Biodiversity Action Plan in 1994.

### ***Biodiversity in Norway***

In Norway biodiversity concerns were first elevated to a more prominent level in White Paper 58 (1996-97). Chapter 5 on Biodiversity adopts the definition of “biodiversity” from the Rio summit and elaborates: *“Loss of biodiversity is a serious problem globally, and is undermining the basis for a sustainable development. Ecosystems deteriorate and species are lost at a rate significantly higher than normal. Loss of biodiversity is an irreversible process influencing the natural evolution that is part of all ecosystems.”* In 1999 White Paper 8 on the Environmental Status stated that: *“We are at the same time facing an extensive and irreversible loss of biological diversity never experienced earlier by mankind. Biological diversity constitutes, together with access to unpolluted soil, water and air, the foundation of our existence”* (Chapter 2) The connection between biodiversity, varied production methods and landscape maintenance is elaborated: *“By communicating values of the cultural heritage, conserving cultural monuments, maintaining biodiversity, natural variation and recreational possibilities, the agricultural sector maintains a whole and living cultural landscape (...) Intensification or termination of agricultural production could represent a threat toward specific species that have adapted to specific/rare living conditions”* (White Paper 42 2000-01, Section 2.2.3).

On the agricultural sector’s specific responsibilities it is stated that: *“The cultural landscape is vital in LD’s<sup>27</sup> policy and its use of policy instruments. The biodiversity in the cultural landscape has evolved within an interaction between nature and man through centuries. Farming areas, forests and outfields have been intensively utilised, and the way of farming has changed through the history. Hence the biodiversity is a consequence of industrial cultivation of the farming areas”* (White Paper 42 2000-01, Section 10.2). White Paper 19 (1999-2000) is the main pillar for the Norwegian agricultural policy, and the notion of

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<sup>27</sup> Equals LMD (Ministry for Agriculture and Food)

biodiversity is also accepted here: *“Conservation and sustainable use of biodiversity within farming areas includes the diversity of ecosystems, habitats, species and genes, and is a crucial task within the follow-up of the Convention of Biodiversity in Rio 1992”* (White Paper 19 1999-2000, section 5.8.2).

While the official statements in the 1990s were general and mere reproductions of quotes in international documents, the targets became more focused and specific after the turn of the millennium. Seven key national targets for the maintenance of biological diversity are presented in the latest Norwegian comprehensive policy document: (White Paper 25 2002-03, Chapter 4.1):

- *A representative selection of the Norwegian nature should be conserved for future generations.*
- *Interventions should be avoided in areas of specific natural qualities, and ecological function must be maintained.*
- *The cultural landscapes should be managed to promote values of the cultural heritage, conserving cultural monuments, to maintain biodiversity and to enhance recreational possibilities.*
- *Harvesting and use of living resources should not threaten species or stocks with extinction.*
- *Human spread of external organisms not a natural part of the ecosystems must not threaten or limit the core functions of the ecosystems.*
- *Threatened species should be maintained at or regenerated to a vigorous level.*
- *Areas with a potential for grain production must be managed with consideration for the coming generations.”*

Linked to the cultural landscapes the same White Paper recognizes the important connection between active use of traditional farming areas and the maintenance of biological diversity. *“This is mainly connected to use of outfields in old cultivated landscapes where the use is reduced or abolished, and in areas where regrowth is a main threat. It is not realistic to maintain use in all of these areas but the Ministry for Agriculture has economic schemes that are directed towards management of a selection of such areas”* (White Paper 25 2002-03 Chapter 4.2).

As we shall see, several schemes have been established to maintain extensive farming in rough areas<sup>28</sup>. The logic behind these schemes is often that biological diversity is dependent of the maintenance of traditional farming<sup>29</sup>, and the upholding of cultural landscapes. One

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28 For an extensive presentation of the role of environmental schemes in the support structure in Norwegian agricultural: see Almås (2002)

29 The connection between biodiversity and active use of the cultural landscapes is elaborated in the following studies: Daugstad and Jones

problem is that the term biological diversity is very scientific and difficult for important lay actors to comprehend. Many actors could therefore run into problems by actively implementing schemes with this underlying logic, simply because it is difficult to get a grasp of the term itself.

### ***Biodiversity in Scotland***

UK was remarkably responsive to these trends, and in 1994 had already produced a quartet of documents, where the UK Biodiversity Action Plan, is of greatest interest for the present purpose. The plan was a general review, but it did provide the Government with a goal: “*to conserve and enhance biological diversity within the UK and to contribute to the conservation of global biodiversity through all appropriate mechanisms...*” (Marren 2002, p 255f). The Government then set up a steering group with representatives from government departments and agencies. At the same time, a consortium of voluntary bodies published the *Biodiversity Challenge* (BC). Marren further describes this action as one of the milestones of the voluntary bodies on the journey from amateur natural history societies to partners in policy-making. The voluntary bodies showed their potential as hardheaded and effective actors in a rough world of professionals connected to government bodies and private businesses. The BC also proposed a vast programme of work that would not only require research but also oblige working together to a common programme instead of in the traditional watertight compartments and client groups (Marren 2002, 256f). The Government relied on the Biodiversity Action Plan as a governing idea for further developments in this policy sector. Principles of sustainable use, precaution in decision-making and knowledge based policy decisions were most apparent. According to Marren the Plan had a variety of hopeful words like “healthy”, “enhance” and “encourage”, but was lacking concrete specific ideas. The result was that the official BAP Steering Group leaned heavily towards BC for information. Actual response to the BAP came at lower administrative levels through Local BAPs; made of partnerships where local knowledge and skills were supposed to achieve national targets. Local communities were trusted to look after and be responsible for their wildlife.

But: “*...biodiversity conservation has not gained as high a political or public profile as climate change, despite the fact that these are the two areas that resulted in binding Conventions at the Rio Earth Summit. Hence, public pressure to act is less intense. There are also very specific technical reasons for non-compliance, which are particularly important for the establishment of monitoring regimes. This stems from*

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(1998) and Olsson et.al. (1998)

*lack of consensus on how to identify criteria for success in biodiversity conservation”* (Baker 2003, p 35).

In the general policy document “Custodians of Change”, the Scottish Executive recognized the need for integrated work in the biodiversity enhancing field: *“We recommend that the Executive, its agencies, local authorities and the agricultural industry focus attention upon, and allocate sufficient resources to ensure that a fully integrated approach to natural heritage and land management is promulgated. In particular, attention will need to be given to implementing Local Biodiversity Action Plans”* (Scottish Executive 2002, p 21).

### **3.4. AE-schemes as the end product of complex policy-making.**

Local implementation of national obligations and targets is the visible outcome within this specific policy sector. The designated schemes are defined and shaped within certain limitations like duration, geographical targeting, and structure of measures. Both Norway and Scotland have introduced biodiversity arguments as an integral part of a range of schemes connected to agricultural production. I would argue that this became clearly visible around 1990, and the following decade saw the evolution of several schemes more or less directly connected to biodiversity maintenance. A common element in these schemes is the argument for an active, varied and extensive use of productive areas. The highest level of biodiversity is reached through a high variation of production types, land use and stocks. One could assume that areas taken out of active use will be “repaired” by nature itself, hence providing a high level of biodiversity. This is not the case however, since non-active use of areas normally leads to regrowth of the land with a resulting reduction in biodiversity (Moen 1998). Over-use and wearing are relevant problems in some parts of Scotland, thus less activity could be the solution. Anyway, varied and extensive use is a desired target in both cases. There is also variation between the schemes regarding what types of measures are meant to foster change. It is now time to turn to the specific AE-schemes, and the following sections provide a descriptive presentation of four Norwegian schemes and two Scottish counterparts.

#### **Norwegian schemes:**

##### ***AK – Areal- og kulturlandskapstillegg***

The most important economic measure is AK support, which gives the farmer grants for keeping agricultural land in active use. In 1996 these grants were raised to a total of NKR 3

billion, and amounted to 25% of the public agricultural budget<sup>30</sup> (Jones 1998, p 195). The latest numbers show that this level of support has been maintained. The total budget has been reduced to under NKR 11 billion, hence implying that AK-support has become an even more important part of agricultural support<sup>31</sup> (LMD 2004). The AK-support is a general per acreage support, and the amount of money received by the farmer is based purely on the area of land used for agricultural production. This means that the support could be administrated with a moderate bureaucracy, and the transaction costs would be kept very low. If a breach of the regulations is detected, the grants could be cancelled and demands for repayment made (Jones 1998, p 195 and LMD 2002, regulation nr 283). The AK is designed to even out and strengthen the variety of types of production, farm size and regional disparities. Further, it should maintain and develop the cultural landscape through active use, and maintain the level of areas in active use.<sup>32</sup> Several discussions have been held over the nature of the Norwegian system of subsidies, and WTO has argued that the AK-scheme has some trade-distorting features. It remains to be seen whether the scheme will be abolished, or changed to fit the green box<sup>33</sup> in the World Trade Organization.

### ***STILK - Spesielle miljøtiltak i landbrukets kulturlandskap***

Another environmental scheme with an agricultural link was STILK<sup>34</sup>. The STILK was not as extensive as the AK in terms of economic importance but very specific in its direction towards environmental protection in the cultural landscapes. Grants under this scheme were considered on the basis of individual applications from farmers. The conservation of cultural heritage, promotion of accessibility to the landscape, the preservation of biodiversity and grazing of cultivated pastures could be legitimate reasons to apply for this grant (Jones 1998, p 195). This arrangement was tested in a period from 1990, and permanently instituted from 1993. At the outset it was directed towards cultural landscapes, while listed buildings became included in the scheme from 1997. The Norwegian Agricultural Authority<sup>35</sup> had the main responsibility for implementing the scheme, although a main part of the day-to-day routines was delegated to the regional and local authorities (Brandtzæg and Lønning 2001, p 17). The

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30 In 2004 the number of agricultural holdings in Norway was 55700 (<http://www.ssb.no/jordbruk/>). Not All of these were eligible for support through the AE-support structure, but the number of 55700 provides an idea of the extent of Norwegian farm holdings.

31 Annual agricultural negotiations Yearly negotiations between key ministries, agencies and the farmers' unions in Norway. The result is an agreement that specifies rules and regulations in the agricultural sector.

32 <http://odin.dep.no/ld/norsk/Ansvarsomraader/Landbrukets-miljoinsats/Kulturlandskap/020031-990116/dok-bn.html>

33 For extensive studies of the WTO-structure see: Veggeland (2002) and Søyland et.al (2002)

34 Spesielle tiltak i landbrukets kulturlandskap

purpose of STILK was to:

*Maintain environmental qualities on the estates with active farming in the cultural landscape. The main focuses are initiatives in the cultural landscape and on listed buildings by preservation, management and renovation beyond what can be expected through normal activity.(...)It is emphasised that the grant encourages environmental qualities for the public, which fosters environmentally friendly production, business development and traditional farming. The scheme could also support the maintenance of rural districts through an increased interplay between agriculture and other parts of the society (STILK-regulation, Preamble).*

In 1992 the authorities accepted 731 applications, and NKR 17,5 million<sup>36</sup> were approved. In 2000 the number of accepted applications had risen to 2791, with a cost of 113 millions. These numbers indicate that the average grant pr. application increased during the period (Brandtzæg and Lønning 2001, p 27).<sup>37 38</sup>

Numbers from 1999 show that the amount of money spent on this scheme increased steadily and NKR 79,5 million were allocated. Added to unused grants from earlier years a total of 93,7 million was available. Support adding up to a total of NKR 86 million that was granted in 1999 and 7,7 million transferred to later years. Our case area, Vågå/Lom, is situated in Oppland County, which is the county with highest level of applications. From this region 349 applications were submitted, and 228 accepted. Applicants originally made demands for almost NKR 19 million, while only NKR 7,8 million were granted. Oppland had 121 out of a total of 325 refusals nationwide and the extremely large number of applications explains this. A large number of uncompleted applications therefore reached the county office, and the result was an unusually high level of rejections (LD 1999, section 2.1)<sup>39</sup>. The STILK-scheme was transferred into the more general Miljøprogram (SMIL-regulation) in 2004, thus ceasing to exist as a single scheme. This coincided with the significant transfer of decision-making authority to the municipalities (Forbord et.al. 2005).

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35 Statens Landbruksforvaltning (SLF)

36 14.des 2005: 1euro = 7.95 Norwegian kroner (NKR)

37 The two main areas of support are initiatives on traditional home fields or rough grazing, and listed buildings. Initiatives in the cultivated landscape, for example burning, fencing or harvesting of special landscapes could qualify for support through STILK. 29 mill NKR of a total of NKR 113 mill were granted to this area of initiatives. The other main area of listed buildings, accounted for 38 mill NKR of the total of 113 mill NKR. The support to restoration of old and listed buildings normally requires a proven connection to agricultural or other commercial activity.

38 In 2004 the number of agricultural holdings in Norway were 55700 (<http://www.ssb.no/jordbruk/>). All of these were not eligible to support through the AE-support structure, but the number of 55700 provides an idea of the extent of Norwegian farm holdings.

39 "Årsrapport for spesielle miljøtiltak i landbruket 1999." LD <http://www.odin.dep.no/archive/ldvedlegg/01/05/Spesm057.pdf>

## **Miljøplan**

The need for a more coordinated and simplified environmental policy was addressed in the farming negotiations in 1999 (St.meld 19 1999-2000, section 2.3.3). The overall solution was to gather the administration of existing AE-schemes into “Environmental Programs”, while the specific outcome for the farmers was the requirement for a “Miljøplan” on each farm. This was supposed to be imperative as part of all applications for support-based arguments connected to environmental goods at the specific farm. The purpose of the Miljøplan:

*”The Miljøplan should promote a more environmentally friendly agricultural production, and maintain or increase the positive environmental side-effects from the agriculture. The Plan should also participate in the value enhancement from the positive environmental effect by agriculture, in addition to visualisation of the environmental efforts by the agricultural sector.” (§1)<sup>40</sup> This regulation is mandatory for all farms that receive production support/subsidies (§2.)*

The regulation is a two-step system where step 1 consists of mapping and description of areas of environmental significance. Step 1 also requires a manuring plan and spraying journal, in addition to documentation of initiatives already accomplished. Step 2 consists of plans, ambitions and documentation of the environmental efforts and achievements at the farm (§4). The administration of this scheme is in the hands of the local councils, while the County Governor is the court of appeal (§6). By demanding individual effort from the farmer one could expect an increased awareness of environmental challenges to be the result. The Plan will increase the farmer’s awareness of the environmental qualities on his farm, and provide a solid database of maps and documentation on the environmental qualities in agriculture. In turn, this will lead each farmer to integrate environmental considerations into other aspects of the farming activities (St.meld 19 1999-2000, Section 6.4.2).

## **Miljøprogram**

In 2004 a new arrangement called “Miljøprogram” was instituted.<sup>41</sup> It replaced some of the old schemes (e.g. STILK) in addition to increased management of abandoned land. A main focus of this scheme is that its administration will be placed as close to the public as possible under the principle of subsidiarity.

*”To increase the effectiveness of the environmental effort in the agricultural sector, the Department (of Agriculture) aims at a co-ordination of environmental schemes into a national environmental programme, where one regulation is that each farm must have an approved Miljøplan. The Programme will provide each farmer with a*

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40 FOR-2003-01-15-54 “Forskrift om miljøplan”

41 While this report focuses on schemes that have been active for some years, this new programme will not be analysed to a great extent.

*greater possibility to solve local environmental challenges.”* (White Paper 42 2000-01, section 10.4.3).

The Miljøprogram is supposed to replace a number of former schemes aligned towards improving environmental qualities in agriculture, most notably the STILK-scheme, described above.

The Miljøprogram is implemented as a regional effort where the County Governor receives a countywise transfer of money, and further delegates economic resources to the municipalities according to the quality of the local environmental strategies. The municipalities have received the same amount of money as they did under former arrangements, although differentiation is supposed to evolve over time. Both general schemes with positive environmental effects and targeted AE-schemes<sup>42</sup> are combined and arranged within the framework of the “Environmental Program”

### **Scottish schemes**

A wide range of schemes with pro-environmental intentions has been designed and implemented in the Scottish system during the last couple of decades. Here the focus will be on two of these: the Environmentally Sensitive Areas scheme and the Rural Stewardship Scheme. These schemes are chosen due to the fact they have the most obvious connection to the maintenance of the cultural landscape and biodiversity, and are most comparable with the four Norwegian schemes already mentioned.

The Cairngorms is designated as a Less Favoured Area (LFA), thus it is eligible (under EU regulation) for various compensatory allowances under the Agenda 2000 reforms to weaken the link between payments and stocking rates<sup>43</sup> LFAs are designated under EU-law and are eligible for subsidy under EU-legislation depending on the nature of farming carried out on the land. The first LFAs were designated for the UK in the mid-1970s and were based on hill areas (Department of the Environment 1992, p 60). The landscape in the Cairngorms area bears similarities to that of the western parts of Norway. Both areas have alpine mountains, a rough climate, windy conditions and high precipitation. Farming businesses are normally

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<sup>42</sup> Previous measures have consisted of informative schemes where “Living cultural landscapes” (“Levende kulturlandskap”) in 1988/89, “Environmental focus” (“Miljø i fokus”) in 1990 were the first to include cultural landscapes as important environmental concerns. Within R&D MD and LD financed a project on “The cultural landscapes of agriculture” (“jordbrukets kulturlandskap”) between 1991 and 1996. A DN-funded “National registration on valuable cultural landscapes” between 1992-95 presented us with 104 areas of valuable areas (Jones 1998, p 197f).



concentrated in the valleys with reasonably large-scale production of fodder, and a focus on livestock, mainly sheep and cattle. Forests are commercially exploited in some parts of the Highlands. Tourism businesses have increased their activities, with infrastructure connected to ski-tourism, angling and hunting, and many combine part-time employment in these sectors with traditional farming.

### ***ESA - Environmentally Sensitive Areas***

The ESA scheme was introduced in Scotland in 1987, designed as management agreements for a period of up to 10 years. This was a recognition of the major influence agriculture has on the conservation and enhancement of landscape, wildlife and historical features (Department of the Environment 1992, p 60). In Scotland the areas were chosen after suggestions from the SNH (Scottish Natural Heritage). Cairngorms Straths ESA was designated in 1992, and recognised the need for environmental management of farms in the area. The designation is linked to the following characteristics of an area; great national environmental significance, importance of maintenance of particular farming practices or continued use of environmentally friendly activities. If farming in an area of this type of designation, a farmer could enter an agreement on voluntary basis with the authorities, and receive a per hectare grant for environmentally friendly farming practices<sup>44</sup>. The total transfer of money under this scheme<sup>45</sup> in 2004 totalled approx. £10.500. Aesthetic arguments were stressed, although biological qualities were also assessed when designations were made (Rønningen 1999, p 114). A distinctive characteristic with the Scottish approach was that farmers in addition to being part of a ESA designated area had to develop a conservation plan, which placed sites of conservational quality on a map (Rønningen 1999, 117). This is not totally dissimilar to the Norwegian “Miljøplan” presented earlier in this chapter, and could have increased the awareness among farmers of the environmental qualities of their farms.

### ***RSS - Rural Stewardship Scheme***

The ESA was replaced by the RSS in 2001 and smooth transition to the new scheme was expected to be achieved through a range of adaptations. The core principles of the

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43 Policy Inventory, UK BioScene Team, Spring 2003.

44 The number of Scottish farm holdings totals around 50000 (<http://www.scotland.gov.uk/Publications/2005/06/08114942/49439>). Most of those are eligible for some form of environmental support.

45 ESA agreements were made on long-term basis, and although the scheme was transferred into the Rural Stewardship Scheme in 2001, some payment agreements still remain (Economic Report on Scottish Agriculture).

<http://www.scotland.gov.uk/Publications/2005/06/2290402/04093>

arrangements were to ensure that all farmers should receive grants based on the qualities of their farms:

*“The Rural Stewardship Scheme (RSS) helps ensure that farming is a lead player in the protection and enhancement of our environment. The scheme also plays a major role in sustainable rural development and helps to maintain the prosperity of our rural communities”(...) “The RSS is expected to contribute to the achievement of a wide range of rural policy objectives, for example the delivery of demonstrable benefits to the environment and biodiversity (which have the potential to produce wider benefits e.g. through “green” tourism), contributing to farm-income (...) providing employment opportunities for contractors and supporting the retention or development of rural skills such as diking or hedge management” (Scottish Executive 2003, p 2-4).*

If a farmer wants to join the scheme he must:

*“...manage specified land and undertake capital works in accordance with the requirements of the option you have chosen; and follow certain General Environmental Conditions and the Standard of Good Farming Practice which apply over the whole of your land” (Scottish Executive 2003, p 4). The Scheme is entirely voluntary and requires a prior Environmental Audit to be undertaken for the farm, croft or common grazing to be entered into the Scheme (...) the Audit will identify all habitats and features of conservation value on the unit and help applicants decide which areas will benefit most from the Scheme” (Scottish Executive 2003<sup>2</sup>, p 14).*

The public spending<sup>46</sup> on this scheme has risen significantly from £3.2 million in 2002 to almost £16.3 million in 2004.

### **3.5. Summary**

This chapter has presented the growth of biodiversity management from being a scientific occupation for only a few people in 1972, to the current status as a prominent topic of discussion in the world of environmental considerations and resource management. Biodiversity grew from being a part of the discussion concerning sustainability in the period from 1972 to 1987, to becoming one of the most specific environmental focuses in the 1990s. This is certainly connected to the formalised structure created after the establishment of the Convention of Biodiversity in 1992. During the 1990s increased attention was paid towards biodiversity in national policies, with biodiversity arguments more prominently placed in policy documents. In Norway and Scotland general environmental schemes (partly) connected to biodiversity were already designed around 1990, while specific and pinpointed schemes have grown in numbers and significance since around 1997. The next chapter will focus more closely on the practical solutions made by Norwegian and Scottish policy-makers, and evaluate specific challenges and possibilities connected to the design and administration of the selected schemes. The analysis will build on interviews made with key informants in the

administrative structures, and is supplemented by reports, evaluations and policy documents connected to the specific schemes.

## 4. THE IMPLEMENTATION OF AE SCHEMES - AN ANALYSIS

*“The purpose of qualitative inquiry is to produce findings. The process of data collection is not an end in itself. The culminating activities of qualitative inquiry are analysis, interpretation, and presentation of findings”* (Patton 1990, p 371).

### 4.1. Introduction

The analytical part of the present report focuses on the administrative challenges connected to the implementation of biodiversity-oriented AE schemes. Biodiversity issues are complex and need management based on a high level of knowledge and competence. This analysis discusses different approaches to the administrative organization designed to maintain biodiversity qualities in the cultural landscape. While the preceding chapter presented the global, national and local implementation of biodiversity maintenance into the agricultural policy sector, this chapter turns attention towards the experiences with specific AE schemes in the administrative structures in Norway and Scotland.

*“The first task in qualitative analysis is description. The descriptive analysis answers basic questions. (...)Description must be carefully separated from interpretation. Interpretation involves explaining the findings, answering “why” questions, attaching significance to particular results, and putting patterns into an analytic framework”* (Patton 1990, p 374f).

*“Descriptive classification and measurement research call for processes that some writers do not call” analysis.” There are no independent variables to relate to dependent variables. Rather, there is but one – or several – dependent variable whose relationships are not in question, as in a census or other measurement of multiple variables. The analysis begins with standardizing the data and separating it into convenient or interesting categories and ends with summarizing statistics or with graphs or tables of the data”* (Simon 1969, p 333f).

The structure in this chapter is based on the implementation study where intentions/decisions are filtered and altered through a number of crucial phases. Thus, the concepts of “program-theory”, “use of policy instruments”, “horizontal integration and vertical governing” and the “adjustments at the local level” are suitable factors related to the topic. These are analysed based on information in relevant documents and through interviews with bureaucrats and administrators at different levels in the two systems. Norway and Scotland are compared briefly, and an overall comparison is provided towards the end of this chapter.

#### 4.2. The “program theory” of six AE schemes in Norway and Scotland

From a starting point in the tradition of implementation analysis, the clarity of the stated target in a given scheme is always important. The aim of AE schemes should be to maintain an environmentally-friendly practice, or to change activities that destroy biodiversity. Interesting aspects here would be whether all administrative actors share the understanding of what the main challenges are, and to what extent they agree on suitable solutions to these challenges. The “program theory” was presented as a suitable analytical category in chapter 2, and this will be further illuminated in the following. Important questions here are whether “biodiversity” as a concept has the same meaning to all actors, and if there is consensus regarding suitable mechanisms for biodiversity maintenance related to agricultural production.

##### *Norwegian schemes*

AK (Areal- og kulturlandskapstillegg) is a general per acreage support scheme that has several aims. The main biodiversity argument of AK is recognition of the need for maintenance of the cultural landscape through active support of otherwise unproductive areas. *“The AK is a significant economic scheme, with a clear environmental orientation. AK support is open to farmers who meet certain minimum requirements, while the more specific environmental schemes require compliance with more thorough demands.”*(Informant, SLF<sup>47</sup>) AK is the scheme with greatest economic importance in this respect, contributing to a significant transfer of NKR 3 billion to Norwegian farmers. This support secures active use of large areas that otherwise would have been taken out of productive use because of economic rationalization. *“Technological development in agriculture has been more rapid in other countries than in Norway, thus Norwegian agricultural policy has functioned as a decelerator. The general payments ease the challenges resulting from the slow rate of development in Norway, thus keeping areas in use that normally would have been clogged.”* (Informant, LMD<sup>48</sup>) The interview objects (IOs) find this general scheme desirable due to its administrative simplicity as the level of support is based on area. *“The AK rewards a farmer that maintains large areas extensively rather than using small areas intensively.”* (Informant, LMD) The main worry with this scheme is whether it would comply with the WTO regulations in the future, as it has been claimed that it may possess some trade-distorting qualities.

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<sup>47</sup> Statens landbruksforvaltning – Norwegian Agricultural Authority

<sup>48</sup> Landbruks og matdepartementet – Ministry of Food and Agriculture

Identification and mapping of environmental qualities is crucial if one seeks to assess whether the state of biodiversity is improving or deteriorating. *“Routines for reporting and evaluating will be crucial in the years to come. A large share of money and decisions is moved to a lower administrative level, and surveillance through good routines is vital”* (Informant, SLF). It is impossible to build this level of competence to perfection in a short time span. It should nevertheless be a goal to establish a reasonable level of knowledge about these mechanisms. A crucial part of the implementation theory states that all schemes should be based on a well-established “program theory”. As an IO from the national level (LMD) stated: *“The understanding of the scientific term “biodiversity” is not the main problem. But we have some challenges to do with the knowledge base in these issues. Unlike the Swedes, we have not done a thorough mapping of biodiversity qualities in all areas. Such a registration would have been desirable for the design of targeted schemes”*. Derived from this statement, one could propose that more efforts are put into the identification of biodiversity qualities. This would enhance accuracy when new schemes are designed and implemented. The main biodiversity challenge in the Norwegian case area is the regrowth of formerly maintained areas. *“We should have had a greater number of grazing animals in this area (...) The solution to maintain specific qualities is probably a higher level of prioritisation.”* (Informant, local administration Lom)

STILK (Spesielle miljøtiltak i landbrukets kulturlandskap) is more directly linked to environmental qualities of agricultural production, mainly connected to the conservation of biodiversity and the maintenance of aesthetic features in the landscape. The extent of support through STILK reflects the level of agricultural activity in different parts of Norway, with the counties of Sogn og Fjordane, Hordaland, Hedmark, Oppland and Buskerud as the main recipients of support (Brandtzæg and Lønning 2001, p 44). *“Agriculture is seen as an important culture bearer through a long tradition of maintenance of landscapes and buildings. Agricultural production as a steward of the cultural landscape is accepted both within the sector, but also by actors in other sectors”* (Informant, FMLA Oppland<sup>49</sup>). This is probably due to the importance of scenic qualities produced by farming in Oppland and accepted as an integral part of the foundation for active tourism businesses in the region. Activities directly connected to biodiversity have normally less visible results than activities

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49 County Governor in Oppland - Section for agriculture

connected to pastures and listed buildings, and will therefore often raise questions of legitimacy among the users (Brandtzæg and Lønning 2001, p 67 f). The understanding, use and practice of the concept biodiversity are based on the definitions given in international agreements, and the professional agencies<sup>50</sup> in Norway. Most agencies both at national and regional level share these definitions, but *”the need for prioritisation could be difficult to accept for a professional working with species and numerical biodiversity. Authorities working with general agricultural/environmental policies could find resistance from these professionals when it comes to political negotiations over biodiversity qualities of higher and lower importance”* (Informant, SLF).

There seem to be a common understanding that Norwegian agriculture cannot maintain all areas of biodiversity importance. Due to this, talks are continuing over the selection of specific areas for the implementation of intensive efforts. *“Accurateness is supposed to be achieved through regional and local knowledge, where these levels are given a high level of discretion when important areas are identified. The national level will provide funds to each region, but will only intervene to a small degree in the selections made by the regional/local levels”* (Informant, LMD) This understanding is shared by the local level, which concedes that the agricultural policy of today cannot maintain all areas, and that one *“should prioritize specific areas, and try to maintain these”* (Informant, Local administration Vågå). To the present day<sup>51</sup> there has been a “problem” that too high a percentage of the applications have been granted financial support, hence leading to a practice where all projects have been accepted. *“There is a growing interest in issues connected to biodiversity. There is a high level of local involvement and participation in the different gatherings and information meetings that are held throughout the county”* (Informant, FMLA Oppland). The national level has expressed a need for some level of competition among the applicants, where an increase in the number of refusals could be fruitful. One informant from the national level states: *“We would like to see more competition for the funds. There should have been more refusals. This sounds crude, but it would probably lead to a higher quality of the implemented projects.”* (Informant, LMD) There is also growing concern over the potential disagreements on issues of agricultural production and area conservation. Traditionally, most conserved

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<sup>50</sup> Mainly Directorate for Nature Management

<sup>51</sup> In 2004 STILK was integrated into the new SMIL-regulation, where the purpose is similar to STILK. (Lovdata, SMIL-regulation 2004) The most important change is that the focus on biodiversity is reduced, as it is not explicitly mentioned apart from §5 on the level of economic support. Another interesting aspect of the SMIL-scheme is the absolute demand of an approved Miljøplan, if a farmer applies for

areas in Norway have been remote areas classified as wilderness. During the last decade, Norwegian policy makers have increasingly targeted conservation of a certain percentage of Norwegian landscapes. This has led to a higher level of infringements with agricultural areas. The environmental authorities in Oppland (FMVA Oppland) concede that a higher level of conservation is desired, but state that this cannot be done without reflection over the values that one seeks to conserve. If agricultural production has produced an area of scenic beauty, the conservation of this area should not interfere with traditional agricultural practices. Another criticism of this arrangement has been the level of transaction-costs related to the distribution of money and control of the outcomes. A scheme as detailed as STILK would of course need some level of administration, but there have been voices stating that a larger part of the environmental transfers should go to the farmers. On the other hand some of the administration at national level has indicated that more controls of the actual outcomes would be desirable.

The Miljøplan: “... *should contribute to environmentally friendly agricultural production and to an increase in positive environmental production. The Plan should also lead to added value from the positive environmental effects of agricultural production, and to making the environmental effort visible*” (Forskrift om miljøplan 2003, §1). This scheme calls for increased awareness of environmental challenges by demanding an individual effort from the farmer. The Plan will increase the farmer’s awareness of the environmental qualities on his farm, and provide a solid database of maps and documentation on the environmental qualities in the agricultural holdings. Consequently, this will lead the farmer to integrate environmental considerations into other aspects of the farming activities (St.meld 19 1999-2000, Section 6.4.2).

“*The Miljøplan is a process of consciousness-raising*” (Informant, SLF). This Miljøplan could contribute by suggesting new mechanisms connecting the aspects of landscape use, production methods and biodiversity. As the local authorities put it: “*The Miljøplan is positive. The farmers shall identify important parts of their property. They have to give different areas and sites different coloration on a map and this is crucial if we are to raise their awareness in these issues. We have to begin with extremely targeted and concrete tasks. That would be the right way to procede*” (Informant, local authorities Lom).



The Miljøprogram “...will produce improved accuracy through a co-ordination of the schemes with an environmental logic. A better and more transparent system for reporting will also be established. (...) As for the Miljøplan, the Miljøprogram is implemented through two levels of participation from the farmer. The general level complies with minimum regulations through a set of juridical measures. The extended level is based on voluntary participation in specific projects with high environmental value and importance (St.meld 19 1999-2000, Section 6.4.1). The Miljøprogram is a way of gathering similar schemes into one purse, and giving the regional/local authorities greater discretion in the allocation of resources. “The national programs are approved by national authorities and the farmers’ unions, while the regional programs are administered at the lower levels. Good routines must be secured to provide a foundation for effective implementation of the significant resources.” (Informant, SLF) While AK is a general nationwide scheme, this new Miljøprogram opens some possibilities for regional adjustments. “Norway is a country of geographical and agricultural variation; hence flexible schemes are desired in this respect” (Informant, SLF).

“In the annual negotiations of 2002, schemes with environmental argumentation were brought together. The Miljøprogram was instituted to solve regional environmental challenges in a cost-effective and targeted manner (...) A political goal was to regionalise and localise the responsibilities because the affected parties/users should manage this scheme” (Informant, SLF). The Miljøprogram consists of a number of initiatives, and it relies on a number of policy measures. We see that the schemes are quite general, in the sense that they do not point to specific efforts that should lead to maintenance or an increase in biodiversity. The general statements relate to activities that are “environmentally friendly”, thus indirectly providing a basis for biodiversity management.

The present empirical material shows that there is a significant degree of acceptance of the logic behind biodiversity challenges in the Norwegian landscapes and suggested mechanisms designed to counter undesired developments. The national level of the political and administrative system argues that international agreements with respect to the defence of vulnerable species must be met. Another argument is the multifunctional importance of extensive farming in Norway, where the use of varied techniques is important for the maintenance of cultural landscapes, traditional buildings and biodiversity. The farmers’ unions, as expected, focus more on the economic aspects of the support system, because a

sufficient income from agriculture is important in the overall regional policy in the country. The included stakeholders agree on the actions that must be taken to successfully maintain biodiversity in cultural landscapes in Norway. Biodiversity in agricultural areas in Norway depends on actively upholding the landscape through extensive and varied use of farmlands. This is closely linked to general national and international agricultural policies. It is impossible to maintain traditional cultural landscapes if national policies discourage rural settlement, or if international agreements disqualify the Norwegian agricultural support structure. We have seen that the AK is a general scheme with great economic importance for most agricultural holdings in Norway. This scheme maintains biodiversity based on an understanding that large areas with varied production secure some level of biodiversity. The now abolished STILK was more directly targeted towards purely environmental aspects of the cultural landscape. Active and interested farmers received support if they designed projects aimed at preserving environmental qualities on their farm. Biodiversity was one of the most important sections within this scheme. The scheme did not fully finance these projects, and fulfilment relied on some level of voluntary work. The third scheme discussed in this section, the Miljøplan, is based on the positive environmental effects that follow if farmers are aware of specific qualities on their farm. Later years have seen the development of the Miljøprogram where regional and local authorities are given more discretion in the implementation of environmentally friendly projects in their area. A number of detailed schemes have been gathered within one single framework and accuracy is supposed to increase when local knowledge is integrated into the process.

The IOs in this study were largely united regarding the understanding of the term “biodiversity”, and all IOs expressed agreement with the definition made through a number of official statements ranging from the Convention on Biodiversity (1992) through a White Paper on Sustainability in 1996/97, to a number of White Papers published during the last five years. The main obstacle becomes visible when this logic is communicated to the local level and to the landscape producers themselves. The national policies in this sector are often vague, blurred and general, while the applicants feel a need for extremely targeted projects that result in a visible outcome.

### ***Scottish schemes***

Two Scottish schemes are assessed. These are the Environmental Sensitive Area scheme (ESA) and the Rural Stewardship Scheme (RSS). The RSS has replaced the ESA through a

short period of transition, thus the former is not part of the current structure. It is nevertheless useful to see the two schemes in combination, since they provide a foundation from which to assess the development of management schemes in Scottish environmental policy. As was the case in Norway, the Scottish informants also accept the need for varied and extensive use of the cultural landscapes. The challenges are somewhat different, but acceptance of the international definitions of biodiversity is high in Scotland. As an informant from the Scottish Executive Environmental and Rural Affairs Department (SEERAD) in Inverness states; *“I don’t think the term (Biodiversity) is too scientific. But some areas are more receptive than others. The Cairngorms for example has been part of ESA for 10 years. They are more switched on. Farmers down there are more advanced than farmers in other areas. Farmers are more and more receptive.”* Another informant states: *“Some see it only as plants and animal variation. We work towards an understanding that takes a broader view. We want to see people as part of the biodiversity. We very much focus the person as being totally involved. I don’t know if we have a broader view, but in most reports it (biodiversity) means living tissue.”* (Informant, FWAG<sup>52</sup>). The national level focuses on the different interests of the agencies and organizations that are included in the design phase of the schemes: *“Biodiversity is in the forefront of the agenda of all the agencies we work with. E.g. RSPB.<sup>53</sup> Very interested in birds, and maybe not vegetation. This varies among the variation of agencies. RSS consist of 40 prescriptions and that is the result of the wishes of many interests. I would say that they have an excellent grasp of the term BD. But of course they have different priorities.”* (Informant SEERAD, Edinburgh)

Most informants identify the Biodiversity Action Plan (both the overarching UK Biodiversity Action Plan and a number of Local Biodiversity Action Plans) as crucial for implementing biodiversity considerations in other sectors: *UK BAP had an effect on this work. There was also an initiative to create local BAPs. This has been carried out in Cairngorms, although the BAP area is bigger than the National Park. 15 agencies are included in the work of local BAP in this area. This effort is concentrated both towards the current work of mapping qualities in the area, and promoting strategies for further enhancement. Specific action is directed both by national targets connected to specific species and feedback from local interests who communicate what habitats and species are of great value. There is an overall target of stopping the loss of biodiversity by 2010.* (Informant, Scottish Natural Heritage) Asked if the

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<sup>52</sup> Farming and Wildlife Advisory Group

<sup>53</sup> The Royal Society for the Protection of Birds

term biodiversity is an important part of their daily work, and informant replies: *“Crucial! It is virtually everything we do. All advice we give, comes back to the environment. UK BAP are used to steering the targeting of projects. Local priorities come into consideration as well.”* (Informant, FWAG) The national level agrees: *“Absolutely! In the forefront of it. All our schemes have the interest of the countryside. RSS allow people to be paid for managing this, and also capital activities like fencing, and is important for the local economy. The reason underneath this is that BD could be improved.”* (Informant, SEERAD Edinburgh)

The National Park Authority, which exercises management of a number of tasks in this area, also highlights the role of a local biodiversity action plan: *We have a duty to improve and enhance the natural heritage. We also have a Local Biodiversity Action Plan, which we are working to implement. We want to help the local people that live here to manage the land in a flexible way. There are economic and social aspects as well* (Informant, NPA.)

*The ESA scheme* was introduced in Scotland in 1987, and was designed as management agreements with up to 10 years duration. This was a recognition of the major influence agriculture can have on the conservation and enhancement of landscape, wildlife and historical features (Department of the Environment 1992, p 60). If located in an area of this type of designation, a farmer could on voluntary basis enter an agreement with the authorities, and receive per hectare grant for environmentally friendly farming practices. There was a long-term perspective to the ESA scheme, with agreements made between the authorities and farmers of 10-year duration, with a possible extension thereafter. In addition to being part of an ESA designated area the farmers had to develop a conservation plan, which consisted of specific objectives of conservation quality placed on a map This was not totally dissimilar to the Norwegian “Miljøplan” And:”...under the ESA scheme SNH designated several areas where specific features should be preserved through traditional farming practices. Wetlands, grasslands and woodlands were typical areas. Protection was one element, where the farmer could not intervene. Not allowed to damage. In the second (tier 2), the farmers were supposed to actively manage these specific qualities. The uptake was slow, but more people became aware during the years” (Informant SEERAD, Inverness). *”To our knowledge the ESA was a success. If not, there would not have been a guarantee of transfer to the RSS. That is probably the best indicator for success. ESA has gone since late 1980s and had to be adjusted. There was no competition in the former scheme”* (Informant SEERAD, Edinburgh). *The answer is yes! It was slow to take off. It required a few innovative farmers in each area to take off. 80%*

*participation after some years(...) Very important that it raised the awareness of environmental issues among farmers. Most agricultural support will probably change to some environmental argumentation all around Europe (possibly the world), as the argument of food security is less evident* (Informant, National Farmers Union of Scotland - NFUS). Challenges related to the transfer to RSS were recognised in 2002 as: *“Many of the farms and crofts which entered the programme at its inception are approaching the end of their agreements. There is widespread concern as to the future, post ESA. Crofters and farmers in the Isles have low expectations of RSS; the current scoring system favours large, diverse holdings”* (Scottish Executive 2002, p 49). The suggested solution was immediate introduction of transition adjustments. Concerns were expressed about a probable retrograde development if there was any delay in this approach.

The RSS: *“...is expected to contribute to the achievement of a wide range of rural policy objectives, for example the delivery of demonstrable benefits to the environment and biodiversity (which have the potential to produce wider benefits e.g. through “green” tourism)”* (Scottish Executive 2003, p 4). This is supporting the development of a farming sector from a focus solely of the intensification of production, to accepting the multifunctional role of agricultural areas. Additional income from relevant activities could promote the sustainability of an existing farm, an existence that in many cases would have been threatened from agricultural policy promoting large-scale intensification and rationalisation. *“The RSS has been going on for 3 years. 30% percent of the applicants came in the first year. 30-40% of a total of 470 applicants were accepted the second year. (This system was adjusted the third year.) We arranged with Brussels that this could be paid through modulated money. There were 1087 applicants and 99% accepted. Not too many complaints about getting access to the scheme now. There is no limit on how much one farmer could be granted and one farmer could get a huge part of the pot. The direction of the ranking must be adjusted each year”* (Informant, SEERAD Edinburgh).

A farmer must also: *“...follow certain General Environmental Conditions and the Standard of Good Farming Practice which apply over the whole of your land”* (Scottish Executive 2003, p 4). Knowledge about positive biodiversity effects must be communicated through this system to give farmers an understanding of the importance of their farming. General per acreage support for environmentally friendly practices will be the long-term solution if one wants to guide farmers in an environmentally friendly direction. One great benefit from this

approach is the relatively low administration costs. Thus: *“Farmers are switched from the 10-year agreements of ESA, to the RSS scheme. Basically an extension of the ESA scheme, but it has become a nationwide scheme.”*<sup>54</sup> RSS encourages farmers to undertake environmentally friendly farming practices, and at the same time protect and enhance species, wildlife and habitats of conservation interest. (...) *The first year, 30-40% received grants, while now (the third year) maybe 80-90% receive funding. We have altered the ranking system to promote low cost projects. In the early stages we received applications for very expensive projects. This is done to give funding to more people. Expensive projects won’t get much funding each year, but are not kept from applying year after year after year”* (Informant SEERAD, Inverness). But: *“The competitive nature of the present schemes is probably illegal, and we have worked for several years towards aiding all eligible conservation issues at the farms. Farmers compete with farmers at the moment and projects compete with projects. Up to 60-70 per cent of applications are turned down“* (Informant, NFUS).

One featured intention is that the scheme could be adjusted during its course, because the introduction states that: *“The Rural Stewardship Scheme is expected to evolve over time in order to benefit the environment...”* (Scottish Executive 2003, p 2). The scheme has however met some criticism based on its ranking system, where farmers are granted funds based on the environmental importance of their management projects: *“RSS, the new scheme, has lots of problems. It is supposed to simplify the environmental administration. The objective is fine, but it will happen at the expense of conservation. Agricultural seasons differ across Scotland, and a simplified system might not reflect local conditions. The RSS does not contain the prescriptions of the ESA scheme, and does not contain the same flexibility. The main problem is the lack of funding. This goes back to the government not willing to use money on these efforts. With the ESA you were guaranteed support if you fulfilled the prescriptions. With the RSS the budget is so small that the entry is narrow (...) Applications are made to maximise points, not according to what gives the best effect”* (Informant, NPA). When asked why the seemingly successful ESA scheme was changed into the RSS scheme, an informant from NFUS answers: *“The original scheme was only eligible for those within the particular areas and professional advice came from biologists who insisted that there were possibilities within any farm. The Countryside Premium Scheme”*<sup>55</sup> *was eligible only outside ESAs, and with Rural*

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<sup>54</sup> ESA support was only received in a number of designated regions

<sup>55</sup> The Countryside Premium Scheme offered additional payments for the management of set-aside land for the benefit of the wildlife, landscape and the local community. The scheme came into operation as a 5-year pilot scheme in 1989, and was terminated in the mid-1990s

*Development policy under CAP from 2000...it became a nationwide scheme. The RSS was better than what was threatened, but we argued for the maintenance of the ESA scheme. £64 million a year would be needed for a fully financed environmental scheme. We are only half way there”* (Informant NFUS).

An important question is whether the actors in the Scottish system find the logic behind the schemes reasonable and the stated purposes feasible. The challenges to biodiversity in Scottish agricultural landscapes differ somewhat from what we saw in the Norwegian case. While the main threat in the Norwegian system was the regrowth of land due to abandonment of unprofitable areas, the key challenge in Scottish farmland is of a different nature. Grazing land is used efficiently without much variation of stocking rates and land use. The deer secure the grazing of vegetation in the outfields, almost to a degree where it could be characterised as a wear out and land degradation. It seems to be accepted that the main foundation for these environmental schemes must be a per acreage support payment for environmentally friendly activities as: *“The best argument for support in the long term would be to show how they produce public benefits”* (Informant, NPA.) There is no need for more intensive use of most areas, but an economically sustainable future is the goal for all parties. International trends, mainly related to the future development of the Common Agricultural Policy system (CAP) in the European Union, are the subject of significant interest on the part of the included stakeholders in the Scottish system. Most of Scotland is classified as a Less Favoured Area under the CAP regime, thus securing some level of income for the farmers based on climatic and topographical disadvantages. The AE schemes assessed in this report are of significant size themselves, but major reductions in general economic transfers under the CAP could of course not be made good through these limited AE schemes.

#### **4.3. Policy measures – levers for instituting environmentally friendly activities**

To change undesired activities in order to improve biodiversity maintenance, statements and regulations must be supported by incentives for change. The second analytical category relates to the tools that the implementing agencies could use to change damaging activities into biodiversity friendly practices. We talk about policy measures and policy instruments. As described in chapter 2, these could normally be divided into three main groups: economic, juridical and informative instruments.

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(Rønningen 1999, p 107).

### ***Norwegian policy measures***

AK is a purely economic measure, where farmers are paid an area-based support linked to the type of production that is carried out in that specific area. This scheme requires a minimum of administration, and most farms are eligible for this scheme. AK is an economically important scheme with a transfer of 3 billion NKR (more than 1/4 of the total subsidy system). *“It is positive that the society appreciates the maintenance of cultural landscapes. The AK is an essential part of the farmer’s income”* (Informant, local authorities Lom). What provides an environmental wrapping to the package is the fact that the scheme helps to ease the focus on productivist farming, which was a problem before 1990. Farmers increased their income proportionally to the volume of their production, because all income was connected to prices and production. *“AK is an important part of the farmer’s income, and the demands connected to this scheme are relatively easy to fulfil. The more specific schemes are targeted towards farmers with specific interest connected to certain projects”* (Informant, SLF). Now the farmers are guaranteed a reasonable income based on the size of their farms, and the pressure towards maximization of output has eased. Biodiversity thrives when agricultural production is varied and extensive. The AK has contributed to increased variation in Norwegian agriculture, thus increasing biodiversity. *“The impression is that the scheme is implemented in a similar manner nationwide. But we do not have too much control when it comes to dispensations. Systems for reporting have been established, thus we have numbers of applications and the outcome of those processes, but this depends on the local authorities (...) We are not under the impression that there is reason to doubt the reporting from the lower levels. This has been discussed with the environmental authorities, and they stated that there may have been some underreporting of flaws earlier, but we do not have any indication of this today”* (Informant, LMD.) Questioned about the level of inspections the FMVA Oppland answered: *“There are probably too few controls on the fulfilment of the obligations under the AK. Mostly spot checks. We will get extended requirements through the Miljøplan. I think the farmers would have to cause serious breaches to be having some percentage of the support deducted.”*

One of the most crucial challenges for biodiversity in the Norwegian cultural landscape is the regrowth of areas. Less productive areas, inaccessible slopes and fields around former mountain pastures have been taken out of active use, thus leading to the growth of monocultures, dominated by mountain birch. This creates large areas without the variation of vegetation that is required to foster the targeted biodiversity richness. *“We could maintain a*



*representative selection of areas with the structure of schemes we have today. But marginal areas could be expensive to maintain if the future brings more pressure and reduced subsidies”* (Informant, LMD). The STILK is targeted towards a range of desired outcomes, most importantly biodiversity enhancing projects and maintenance of listed buildings. *“The STILK will probably be subject to a higher level of prioritisation in the years to come. Today it is almost like “anything goes!” The prioritisation will happen through co-operation with central authorities.”* (Informant, local authorities Vågå.) Like AK, the STILK scheme also has significant economic relevance for a number of farmers, but the case for having better information also applies because initiatives under this scheme require some level of effort from the farmer. Applications through STILK demand well-founded documentation of the environmental value of a planned project, and support through this scheme only meets a certain percentage of the total cost, hence requires some level of funding or voluntary work by the farmer. We should expect farmers to be “educated” through this process of applying for support through a well-documented application, and that STILK farmers are better informed of the issues STILK is supposed to address. And: *“The STILK has had a positive effect in combination with other schemes. The number of applications is significant. People think that it is positive to be able to reduce the regrowth of areas. It is not only economic motivation behind this, as farmers express a desire to keep the landscape neat and tidy”* (Informant, local authorities Vågå).

With the start of a new millennium, the information emphasis of STILK was supported through the implementation of the Miljøplan. In the Miljøplan farmers who apply for a range of subsidies have to present a plan of the environmental qualities of their farm. Without any direct financial compensation for this work, we could say that this became an extra burden for the farmers as the yearly reporting responsibility was already considerable. On the other hand, increased knowledge of the environmental qualities of the farm could enhance future possibilities for income through niche activities, in addition to the increased self-esteem a farmer could feel if the environmental status of the farm is raised. *“There could be reactions if a farmer has not produced a Miljøplan by 2004. Deduction in the AK could be one possibility”*(Informant, SLF). The pressure on farmers to produce a Miljøplan could also help to solve the challenge of the required mapping and registration of environmental qualities in the Norwegian cultural landscape. Norwegian environmental authorities need to have well-documented registration of biodiversity at certain stages in the development of environmental policies, if they are to be able to say anything significant about environmental effects of

specific schemes. *“The Miljøplan is a process of consciousness-raising”* (Informant, SLF). This Miljøplan could suggest new mechanisms connecting landscape use, production methods and the state of biodiversity. As the local authorities expressed it: *“The Miljøplan is positive. The farmers shall identify important parts of their property. They have to give different areas and sites different coloration on a map and this is crucial if we are to raise their awareness of these issues. We have to begin with extremely targeted and concrete tasks, thus this is the right way to go”* (Informant, local authorities Lom).

A number of schemes with an environmental basis were gathered together into a single scheme called Miljøprogram in 2004. This was originally labelled as a national effort, but will evolve into regional Miljøprograms in the coming years. As part of the trend towards subsidiarity and devolution of tasks and responsibilities each region has been designated a budget and responsibility for the management of a number of directives. The Miljøprogram is implemented in close co-operation with local authorities. Through this arrangement, the local level has been given decision-making powers on issues where it previously only made preliminary statements, and where the regional level used to have formal decision-making power. *“We saw that specific STILK projects became isolated efforts without any view of the totality (...) The meaning was that the Områdetiltak<sup>56</sup> should provide joint efforts in larger areas. These schemes are now integrated into Miljøprogram from 2004, and the possibilities for projects being combined as a joint initiative will be continued”* (Informant, LMD). Traditional financial grants for specific projects that are environmentally friendly, put juridical strains on specific types of land use and informational strategies linked to improvement in the awareness of the environmental responsibilities of the farmer and the general public. *“We should not create too much bureaucracy here. There is an eternal assessment of the balance between accuracy and low transaction costs. We have been stating quite clearly that the Miljøprogram is aimed towards accuracy and not simplification”* (Informant, LMD).

*“You could get very far by tempting with economic rewards, but correct information to the relevant actors is very important (e.g. Miljøplan). It is more effective that everybody sees the benefit of a specific development, than that they are forced”* (Informant, SLF). Arrangements within this structure of schemes constitute more than a quarter of the total subsidies

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<sup>56</sup> Områdetiltak was a scheme that targeted areas of great national or regional value in terms of landscape qualities and should stimulate co-

transferred into Norwegian agriculture, hence economic self-interest is used as a mechanism for persuading farmers to produce landscapes with environmental qualities. *“There seems to be an interest among farmers to tie the general economic funds to upholding the existing level of production support, while the more individual efforts could be managed by the environmental agencies”* (Informant, FMLA Oppland). The general economic schemes are important to maintain the large-scale farming that constitutes a significant portion of Norwegian agriculture.

The structure of AE schemes could not be seen in isolation from the larger picture, thus the link between AE schemes and other strategies in the agricultural and environmental policy-making has to be reflected upon. A number of juridical measures connected to land use, planning and properties co-exist with the structure of AE schemes already mentioned. This relates mostly to the mandatory responsibilities of regional and local authorities to provide a long-term perspective and sustainable land use. While regulations connected to land use are most visible in urban areas, conservation issues dominate the rural areas, thus regularly coming into conflict with environmental policies. There is a possible conflict between biodiversity interests, which promote active and varied use of the landscape, and a conservation policy that suggests a type of agricultural production that is not leaving any trace. *“There is no point in conserving cultural landscapes, unless one has a plan for the content of the conservation”* (Informant, FMVA). This has not been a major problem until now, but Norway has a goal of a higher level of conservation of large areas in the coming years. This will probably lead to even more interference with traditional agricultural areas. *“The cultural landscape is by definition a landscape in constant change. Who should decide what to maintain? It is important to maintain valuable sites and areas from different times, and that the producer of the landscape, the farmer, is included”* (Informant, SLF). We can see the need for increased consciousness of the complex issues of landscape conservation. *“The national park (Jotunheimen) is a mountainous area, so the cultural landscape surrounding the Park is not included in the conservation. This is probably something we should work on in the coming years (...) Some of the newer parks would probably have some connection with surrounding valleys with summer pastures, which will be designated as a special landscape area. We will then have the means to conserve valuable areas with our policy measures combined with resources through the STILK/SMIL scheme”* (Informant, FMVA Oppland).

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operation between several landowners towards a overarching view of landscape management (Jones 1998, p 196).

Environmental policy in the agricultural sector originated with the need to solve problems with pollution of pesticides and fertilizers and these problems eased during the 1970s and 1980s. The relevant agencies are however keeping a close eye on the issues<sup>57</sup>.

### ***Scottish policy measures***

Scottish AE schemes are similar to their Norwegian counterparts, with respect to the economic importance to farmers, and the educational processes they are supposed to substantiate. The interview objects suggest that the Scottish system is based on soft measures, giving financial rewards for environmentally friendly practices rather than focusing on the punishment of damaging activities. But, *“...there are certainly some monitoring programs. With regards to specific sites, there has been monitoring by random selection. Generally speaking the farmers have followed the management requirements as intended. Initially we did an annual review, where we walked through the farm, to do some adjustments. Now we specify the scheme, and randomly check some farm with regards to pollution and fences and so on. The ESA scheme has generally been successful. The odd case where there have been problems. 80-90% of the cases are OK”* (Informant SEERAD, Inverness). After the transfer to the RSS scheme, this random monitoring has continued, and: *“...it works as intended in the sense that people are applying for funding. It is too early to say anything with regard to the effects (Besides compliance checks). We do not have the resources to do more controls and checks. If we are out doing checks connected to other schemes, we normally do a “whole farm inspection” with an eye to all the other schemes as well”* (Informant SEERAD, Inverness).

The Scottish schemes have normally been dominated by long-term agreements between authorities and the farmer, a practice that is necessary in complex processes like enhancement of environmental qualities in the landscape. But, *“They change the rules each year (in the RSS scheme). It was difficult to get in the first two years, because you would have to have a high level of points. Because of rural development regulation you had a ceiling of £35,000 pounds over 5 years. Rural Development said that this was illegal, and the first years you had no ceiling. Some farms ran away with hundreds of thousands of pounds. The Scottish budget was limited and some farms took all of that. They introduced a different points system, where smaller farmers were encouraged. The result is better now. All farmers have a chance, and the system is fairer. Last year 99% came through”* (Informant, Farming and Wildlife

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<sup>57</sup> The Norwegian Pollution Control Authority is the key agency in this respect

Advisory Group). The authorities conceded some problems with the original implementation, such as: *“RSS was criticised for being discriminating, favouring larger farms and estates, being too prescriptive and lacking local relevance. Limitations on funding mean that RSS has been over-subscribed”* (Scottish Executive 2002, p 47). An improvement was however expected to be achieved by the establishment of co-operative networks and local prioritisations through partnerships (ibid).

Questioned whether they would prefer the soft or hard approach to the use of measures, the NPA says that: *“We are looking at both (...) but encouraging people would be the best way”* (Informant, NPA). And, *“...there can be a mixture of both. There is extensive economic reward, but if a person is judged to have been in breach with the designated scheme then the scheme may be closed, and maybe paid back, with interest. There could also be a fine on top of that. As farmers become more environmentally educated you could impose higher targets. Ten years ago people were not aware of what to do. It is a mixture of measures. There are a number of standards to follow to comply with environmental friendly practices”* (Informant SEERAD, Inverness). The national level also supports this stand, as: *“Most farmers follow the prescriptions, but you would always get some farmers that don’t follow the prescriptions. We could hold back money, get them to pay back (with interest) or even give them a penalty.(...) If farmers do not do what they are supposed to we have a fair way of telling them what to do. Procedures are established. We can exclude them for up to two years. It does not happen often. Prison sentence would be too severe, but we have an obligation to deal with this, with respect to those who actually do what they are supposed to, and those who pay for these schemes. There is also an appeal procedure if they feel hard done by”* (Informant, SEERAD Edinburgh).

Actual AE schemes must also be seen in relation to other types of schemes, e.g. the conservation of land areas or specific sites. Scottish Natural Heritage is responsible for the designation of a number of area conservation schemes, and states that: *“We could work with people in different ways: Earlier we would send a list of specific things of value in an area and if people wanted to change some of those, they had to apply to us. That normally led to a management agreement where we had to compensate the owner. Now there is legislation going through the national parliament, where we are moving away from paying people to not do things towards paying towards positive management. This is rewarding farmers for*

*managing areas of environmental importance. The Natural Care Scheme<sup>58</sup> is a standardised scheme, with standard payments” (Informant SNH).*

The national level calls for nationwide schemes, which secure the democratic values of equal treatment for equal cases, while some actors in the regional/local structures call for some level of flexibility due to the different practices and premises for Scottish agriculture. All actors agree that the schemes must be targeted and transparent, meaning that they should consist of predictable regulations with long-term validity. This will ensure that farmers (and their advisors) have knowledge of the coming challenges, and that they could adapt to future conditions in due time.

#### **4.4. Horizontal integration and vertical governing**

When the program theory is established through a decision or regulation, a range of administrative bodies and agencies is activated to bring the policy decision to life. This process has to include relevant agencies to reach the intended target, and a balance has to be found according to the third analytical category; the level of horizontal integration and vertical governing in the Norwegian and Scottish biodiversity administrations.

##### ***Horizontal integration (HI) in Norway***

The implementation of AE schemes follows a traditional pattern, in the sense of a hierarchic structure with responsibilities divided between national, regional and local authorities. The farmers’ unions, interest groups and NGOs are included in the process through inquiries, white papers and the annual negotiations on agriculture. Formal responsibility for the implementation of AE schemes is however placed on public administrative bodies.

The White Paper on Biodiversity (2000-2001) could be seen as important in the sense of providing all relevant stakeholders with an overarching policy statement concerning biodiversity from all relevant angles. Each ministry was given responsibility for assessing the biodiversity challenges in their specific policy sector, hence providing a high level of horizontal integration with biodiversity concerns on the agenda in all policy deliberations. An

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58 The Natural Care strategy, developed by Scottish Natural Heritage, outlines a programme of measures to increase the use of positive management agreements for the better protection and management of the natural heritage. The strategy reflects developing thinking on the best delivery mechanisms. (Scottish Natural Heritage undated, introduction)

important question is whether this process was successful. Some of the 14 ministries have only limited responsibility for issues directly connected to biodiversity, thus a concerted effort from these agencies would probably fall short. The interest among agencies directly connected to environmental efforts in the agricultural sector seems to be highest. The material in this study suggests that actors in both the Ministry of Environment (MD) and the Ministry of Agriculture and Food (LMD) share an understanding of the key challenges. Informants from these agencies emphasize the good relationship between the agencies at the national level, because of their common educational background, frequent exchange of labour between agencies and the formalised negotiations over the yearly agricultural settlements. *“In addition, there is frequent contact between MD, LMD and their subordinate agencies SLF, DN etc both formally and informally”* (Informant, SLF). *“Things are going smoothly between LMD and MD, both formally and in private arenas. We find a common understanding very quickly. This has not always been the case. The improvement of the relationship has been a process”* (Informant, LMD). Most agricultural schemes with an environmental basis have been defined and shaped during the annual agricultural negotiations. A number of relevant stakeholders in the agricultural sector are represented in these negotiations, e.g. LMD, MD, Ministry of Finance and the two main farmers’ unions. *“Things are going surprisingly painlessly. There are different roles of course. We are in an agency connected to business activities in agriculture, hence we focus most on the economic arguments about farming activities, while MD is professionally responsible for their sector. I think they are satisfied with the efforts made by LMD. LMD has taken responsibility for the (environmental) measures that they have responsibility for”* (Informant, SLF). The framework for the income of farmers, the structure of area based payments and production support is set out in these negotiations, along with strategic choices regarding the future of Norwegian agriculture. We could describe the HI at the national level as significant.

The focus will now be turned to the regional level. An important question is whether the same co-operation between different sector agencies exists also at this level. Both agricultural and environmental authorities at the regional level in Oppland state that co-operation between them is functioning well, and that biodiversity has become a more integral part of policy making at this level. An informant claims however: *“biodiversity maintenance is mainly related to conservation issues, and the connection between biodiversity and cultural landscapes is not high on the agenda”* and *“area conservation is the focus at the moment”* (Informant, FMVA Oppland). The regional level exercises some discretion in the process of

designating specific areas of importance for environmental efforts. *“We work with the section labelled ‘environment and resources’, but the ecological part is always connected to the economy and society”* (Informant, FMVA Oppland). This regional agency accepts the complex nature of ecological considerations, arguing for horizontal co-operation between agencies. *“We have a good relationship with the FMLA. In addition, we could have wished for co-localisation with the county administration as well”* (Informant, FMVA Oppland). The regional level must work closely in this respect with the municipalities, if it is to be able to provide competence and resources to the areas best suited for new projects. Subsidiarity has become a familiar notion in Norwegian regional policy, with more emphasis on the municipalities as key actors in the development and efforts towards innovation. *“There are no areas where we have conflicts with the FMVA, but we are uncertain about the effect of the delegation of power to the municipalities. Will there be local variation in the exercising of regulations? We are aware of the risk of unequal treatment of cases. This process will probably take some time”* (Informant, FMLA Oppland). The regional level has changed from being a decision-making agency with extended responsibility for supervision of municipalities, to becoming a provider of competence through two-way communication with the local level. *“The role of County Governor will probably change. The municipalities will be given a higher level of discretion over applications and the decision over each case. Thus, County Governor will be given a more general role of supervising the implementation of national targets through more and better information”* (Informant, SLF). My material suggests that the two main agencies at the regional level in Oppland have a common understanding of biodiversity challenges and the legitimacy of proposed solutions. HI also exists on this level of authority.

A further question is whether there is a concerted effort among actors at local level to accept and implement AE schemes that are designed at national level and dispersed through the administrative system. The most visible challenge for the implementation of AE schemes in local communities is the level of resources at local farming offices. Many municipalities have decided to move their workforce from local farming offices to other offices providing welfare services like education and care for the elderly. Biodiversity issues demand a high level of competence, thus the question as to whether most Norwegian municipalities have the resources to maintain an active approach to new challenges is relevant. When interviewing informants at local level across Norway the political task of weighing up which are more or less important matters quickly becomes apparent. In this respect the local level is closer to the



real world than the national authorities that define the structure of AE schemes. *“The municipality is given more discretion in the prioritisation of which areas to maintain with respect to landscape and biodiversity. Agricultural production will always be important in this area”* (Informant, local administration Lom). The agricultural authorities at local level must consider biodiversity issues part of the future in their own municipality to a greater degree than national agencies. The number of positions in the local administrations is limited and one must decide what tasks should be prioritised. If the budget is strained, positions will probably not be designated for environmental issues when more imminent challenges to welfare services are visible. Municipalities express an interest in the biodiversity efforts that national authorities have instituted. It is however important that increased responsibilities for these schemes are reflected in improved economic resources both for the individual farmers and for the municipalities as a whole. Horizontal integration over biodiversity is present at the local level, but closely linked to total (economic) development in the municipality. Material from studies of delegation of policy-making power suggests that the farming authorities have experienced a reduction in status and resources during the later years<sup>59</sup>. The chief officers in local administrations normally make excuses with arguments about increased responsibility in other sectors. In turn, this would lead to reduced ability among local farming authorities to make progressive efforts in the implementation of biodiversity. One important aspect of recent official statements is the need for an emphasis on biodiversity management in all policy sectors. The present material suggests that cross-sectoral co-operation between the most relevant policy sectors functions quite well, as informants both from agricultural and environmental structures rate the co-operation as effective.

### ***Vertical governing (VG) in Norway***

*“There is a worldwide desire for regional and local adjustments of schemes”* (Informant, LMD). During the last decade, there has been a trend towards delegation of power to lower levels. Decision making power formerly held by the national level (mainly SLF) and the regional level has been shifted towards local authorities. This trend is in compliance with the general European trend of subsidiarity. All levels accept that maintenance of a traditional agricultural landscape is impossible under the current regime of food prices and support structures. Thus, specific geographical areas must be selected and increased efforts carried out to maintain biodiversity in these regions. *“The new Miljøprogram scheme will open the way*

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<sup>59</sup> Kommunalisering Pluss (<http://www.bygdeforskning.no/prosjekter/Kommluss/index.html>)

*for regional prioritisation through a regional Miljøprogram where each county is given discretion to define valuable areas” (Informant, SLF). Such a selection is based on a high level of local knowledge, thus local and regional levels should be given more decision-making power, resources and competence.*

A simple answer is that all decisions and responsibilities should be placed at the lowest level that has sufficient resources and competence to secure adequate implementation. Is this the case today? The national level has a constant load of responsibilities. Overarching policies and general arrangements are made at this level, and this should also be the practice for the future. Another element is the level of inclusion of stakeholders outside the administrative structures. *“Projects initiated by NGOs are supported through our budget. This is effective in cases where we have the same target as the organization, but are communicating through different networks” (Informant, SLF). The farmers’ unions are formally included in the annual negotiations, but they are otherwise restricted to traditional lobbying. The inclusion of farmers’ unions is not too visible at the regional or local level either. “Reasonable administrative units should be designated to specific types of landscapes rather than defined borders between counties or municipalities, but this is of course an issue for the politicians” (Informant, SLF). Some municipalities have established stakeholder groups around the composition of area plans and municipality plans, thus including key actors in relevant processes. The integrated parties acknowledge this. Greater changes have occurred in the relationship between the regional and local offices. In a number of cases decision-making power has been moved to the lower level. “The County Governor is our extended arm in the implementation of national policies. That role has changed from being a case handler towards more counselling and support for the municipalities.”(Informant, SLF) Regional authorities, which had the final saying in these cases, have been turned into collaborating partners for the municipalities in addition to being a court of appeal when disagreement arises. The most important issue in the current Norwegian debate is the delegation of authority in the implementation of environmental policy. “A range of schemes is gathered into regional Miljøprograms, which is governed within a single regulation (SMIL). The municipalities are expected to develop strategies for these challenges, and the SLF distributes a portfolio (of money) to each county. This portfolio is then distributed to the municipalities based on the strategy work. The municipalities will then take the procedural responsibilities for each*

*application. The County Governor's office, which previously had decision making power, is "reduced" to a supervising court of appeal" (Informant, SLF.) At the core of this debate is the regional level, which has been in constant change since popular control was instituted in the 1970s. "We don't necessarily believe that there is a need for three political levels in a country with a population of 4 million people. The County Governor and the County Administration could possibly have been gathered within one organization" (Informant, FMVA Oppland). In the environmental field, the regional level has changed its role from being an agency for surveillance and control, into a competent agency that has a two-way relationship both upwards and downwards. From being sole advisory agency for farmers in the municipality, local farming offices now have more responsibility for decision-making over the level of grants.*

### ***Horizontal Integration in Scotland***

One should maybe expect Scottish policy decisions assessed in this report to be defined and supervised from London, as Scotland is part of the United Kingdom. During recent decades Scottish political and administrative bodies have however been given some deliberating power within the field of resource management and administration of environmental schemes. This has further increased since the formal devolution of power to the new Scottish parliament at Holyrood, in 1999. The implementation of these schemes is mainly carried out by Scottish agencies and is a product of interaction between central and regional public bodies and a number of NGOs.

Most "national" agencies have their head offices in Edinburgh, as this is the administrative centre of Scotland. This leads to implementation of biodiversity through a number of levels, which increases the demand for integration between agencies with diverging agendas on these questions. Most crucial is co-operation between the environmentally-oriented authorities with responsibility for environmental protection, and the production-oriented authorities in agriculture. The current material suggests that there are close links between different agencies at this level. The agencies have the same understanding of the term biodiversity, and there does not seem to be much disagreement over what challenges should be prioritised. One specific quality of the Scottish (UK) system is the importance of non-state owners of land like the Royal Society for the Protection of Birds (RSPB), National Trust for Scotland and Scottish Wildlife Trust: *We have to work with them as well. The vast majority is owned by large, private estates. Some voluntary environmental bodies have bought pieces of land. SNH*

*try to work with private landowners, but it is still difficult. If you buy the local newspaper, you find criticism of us, from people wanting to build houses or something. Usually there is some kind of antagonism.* (Informant, SNH)

While the Norwegian administrative structure is clearly divided into three clear levels, the corresponding Scottish structure has only two levels of public administration, in addition to local councils. The regional bodies with responsibility for the implementation of AE schemes in the Cairngorms area are situated in Inverness or in villages closer to this region. Most notably is the SEERAD regional office: *“We also work with SNH about designation of areas and sites. SSSI or Natura 2000. They ask us for comments”* (Informant, SEERAD Inverness). Questioned about potential conflicts between conservation interests and productionist interest the informant says that: *“They are normally designed to complement each other. If you get a conflict you could get nowhere, so I think basically they will mesh together quite well. The management is generally speaking quite reasonably. We know each other, so a potential conflict could be solved in a smooth manner”* (Informant, SEERAD Inverness). On the question of horizontal relations an informant expresses the view that: *“...that is interesting because we are situated here with responsibility for nature and nature conservation, while we have a sister organization some miles away with responsibility for forest conservation and we have another organization with responsibility for pollution and so on”* (Informant, SNH). The National Park Authority expresses a desire for more integrated schemes, where all relevant schemes are administrated by a single authority within the park boundaries: *“All schemes are managed by different agencies. We seek to achieve integration and targeted schemes because we have a national park where we (The NPA) can do the overview. Scotland has the opportunity to create”land management contracts”*.<sup>60</sup> *We want to be a region for land management contracts where land managers are rewarded for the benefits they produce. National schemes are general and similar. We could achieve more targeted efforts towards local diversity with these local schemes. Flexibility is an aim because we want to give the land manager a choice of what he or she wants to do”* (Informant, NPA.)

NGOs are more visible in the Scottish case and one agency with close links to farmers is

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<sup>60</sup> Land Managements contracts are a whole farm system of support where farmers, in return for support payments, contract to deliver the outputs associated with multi-funtional farming, that is a range of economic, environmental and social benefits (Scottish Executive 2003(3), p3)

FWAG: *“We are not directly included in the process through direct delivering of objectives, even though we are partly funded by the government. However we tend to support many of their initiatives by delivering them to farmers by being out there on the ground. We do not tend to be a lobby organization. We leave that to for instance RSPB. We do more advisory work. We do try to guide and steer the implementation of the schemes, because we have experience on the ground. We try to advise back to the government, about these experiences, but we do not try to pressure them, thus we are not lobbying. We are increasingly part of consultation processes”* (Informant, FWAG). Local co-operation is also evident in Scotland: *”Yes. There are two levels. One is the UK Biodiversity Action Plan, and there is the Local Biodiversity Action Plan. The local advisory sits two offices from here, and I could work with him on the local challenges. We can target these schemes for local and national priorities. In the RSS scheme, you actually name the species on each farm in the application process. We also do some projects on landscape issues within these challenges”* (Informant FWAG). I find that the interview objects in this study indicate a highly integrated approach between environmental agencies and agencies with responsibility for agricultural issues. The schemes are the result of negotiations between these agencies, in addition to other relevant stakeholders. Worth mentioning are the farmers’ unions, exemplified by the NFUS, which took part in the design of schemes and their adjustment during their period of existence.

### ***Vertical Governing in Scotland***

The management of biodiversity issues in the Scottish agricultural landscape must comply with UK responsibilities to international agreements, most notably the Convention on Biodiversity and different EU-initiated efforts like the Habitats – Directive and the Council of Europe-initiated European Landscape Convention. Thus, *“the Scottish Executive is very much in control of agri-environmental process. Only recently set up a stakeholder group on the technical issues. One has to work very long and hard to change the direction of any of the schemes. The rigidity in the system is clearly visible, but to be fair to the Scottish Executive, they have a small team and are probably working as hard as possible. It is easier to change policies by talking to London or Brussels, because the overall philosophies are designed and defined there”* (Informant, NPA). Because of that, *“we want the National Park to participate in spending these resources, and giving advice on initiatives. This could be related to the trend of subsidiarity in the EU. The Cairngorms Partnership was set up prior to the establishment of a national park, and that process helped to smooth the process of communicating these tasks to the local communities”* (Informant, NPA). Agreeing to this

statement is the local FWAG, which has this to say about the principle of subsidiarity: *“I think it is increasing in all public policy. A bottom-up approach would work because there has been so much pressure. Local consultation is done in many processes, e.g. with the national park here in Cairngorms. The Cairngorms Partnership was important to smooth this process”* (Informant FWAG). There is an important challenge with this bottom-up approach as: *“...you would probably make some hard decisions about whom to leave out. There are 100 different organizations in Cairngorms, and you should probably include those who are willing to do something. The Partnership paved the way for further projects. If we had not had the Partnership, there would probably not have been a National Park today”* (Informant, SNH).

On the role of local communities it is stated that: *“...there have been some controversies connected to large-scale development that have come into conflict with specific species. We have tried to find other locations for these development projects and we feel that farmers especially are quite forward looking. Quite a lot of dynamic farmers see that they are shaping a landscape. They want to produce, but are willing to do other things as well. The local level is responsible for planning and development and the Partnership tried to do this more effectively and smoothly. A number of projects should help to promote co-operation across all agencies and levels”* (Informant, SNH). On the specific task of drawing up an application it is stated that: *“...it is hard to work as an advisor as the rules are changing in the period from when we create an application and the date when the cut off point is decided(...)It does take a lot of administration to deliver them. I would like to see a simpler system, but it will be difficult to make a national system a lot simpler. It does seem to take a lot of time from application to the regional authorities to the farmer knowing whether he will receive some money (Normally ca 6 months). I will guess that it takes a lot of money to do the administration. It would be nice to find a simpler system.”* (Informant, FWAG)

On the impact of devolution of power<sup>61</sup> to Edinburgh in 1999, an informant states that: *“It has evolved ever since, but very slowly. Not hugely noticeable. The ESA scheme was managed from Edinburgh all the way. We had local management without local power. Since devolution there have been changes, but very slowly towards to the local level.”* And, (we have) *“Relatively little connection with Brussels. Much funding from this system. We try to have some small influence on more local levels, and whether we have some influence on Brussels, I*

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61 More on the devolution of power to Holyrood, The Scottish Parliament: see Mitchell (1998).

would doubt that very much (...) NFU(S) and RSPB would be our most important lobbyists in Brussels” (Informant FWAG). The national level contends that contact with Westminster is decreasing: “We are devolved independent government and do not have too much contact with Westminster. The main communication line is with Brussels. We have our own representative in Brussels. I have never had to communicate with our counterparts in England about finances. We normally deal with modulated money internally in Scotland. Of course we have contact with DEFRA<sup>62</sup> on some occasions” (Informant, SEERAD Edinburgh). But the national level does not see a further delegation of power when asked to respond to the concept of subsidiarity: Probably not! As long as EU wants nationwide schemes, this would not happen. The policy would probably not be treated equally throughout the nation, and many would have found it unjust” (Informant, SEERAD Edinburgh).

One interesting observation is that the network of employees within the structure of AE administration is so small and transparent, that most individuals have a fair overview of the relevant counterparts in related agencies. The size of the structure and number of agencies seem to be perfect if the goal is smooth and effective dispersion of information and orders.

#### **4.5. National targets and local adjustments – the role of the street-level bureaucrat**

The current trend of subsidiarity in European politics suggests a desire for a strengthening of regions and the local level as arenas for active policy-making and implementation. The preceding argument suggests that biodiversity management has specific challenges relating to the competence of those who are supposed to monitor and implement AE schemes. How does the local level approach these challenges? How does the local level react to the obvious challenges connected to the complexity of biodiversity maintenance?

##### ***Local level adjustments in Norway***

Local authorities are expected to play an important part in the fulfilment of national targets within this policy field. This must be based on enhancement of local competence in resource management, nature management and ecology (White Paper 42:2000-01, section 2.2.5). “The sense of history and culture as an important part of the society is probably more prominent among farmers than any other grouping of the Norwegian population. Voluntary work is supported in an impressive way in the local communities, as long as they see relevance of the

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<sup>62</sup> Department for Environment, Food and Rural Affairs

*project for the general development of the area”* (Informant, LMD).

Based on guidelines from regional and national authorities, the local office should now to a greater degree choose projects that coincide with local strategies. *“The local acceptance of STILK has increased during its existence, because this specific part of the administration has been used to focus attention on efforts that could increase the level of production. The reluctance of the system to accept new initiatives could probably be ascribed to this tradition. Elderly actors both within the administrative agencies and among farmers could have understandable problems accustomizing themselves to these trends”* (Informant, LMD). Their scope for exercising discretion has increased theoretically, but bearing in mind the ever-present threat of a decrease in local administration budgets, one could ask what is the extent of *real* decision-making authority that is actually granted to local administrators to design their own strategies. The management of biodiversity challenges calls for extensive use of manpower and infrastructure for mapping and supervision, and the trend towards constant reduction of local farming offices in municipalities does not foster an active policy towards these challenges. Normally, the care of the elderly and education of youngsters would always take priority over biodiversity management.

There seem to be overall acknowledgement of the trend towards devolving some power to lower administrative levels. There are however related concerns regarding the resource situation in some municipalities. *“Implementation suffers from the lack of competence in these issues, especially at the lowest administrative level”* (Informant, LMD). Both the national and regional levels raise arguments about this trend of subsidiarity. *“The local level states that it is interested in delegation of tasks, but they lack specific competence in these issues because all of them are supposed to be working with public services. All municipalities had their own environmental advisor, but these positions have been redefined or removed after the earmarking of funds disappeared. (...) I would have loved to delegate responsibilities, but there is a lack of a sufficient receiving apparatus”* (Informant, FMVA Oppland.) Norwegian municipalities improved their environmental staffs and level of competence through MIK reform<sup>63</sup> in the first half of the 1990s, where funds were earmarked for these positions. The last part of the 1990s saw a decline in this focus, as funds were transferred to ordinary municipal budgets. In addition, the local level does not seem to be overly enthusiastic over the

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<sup>63</sup> Miljøvern i kommunene. For more on the MIK reform, see: Hovik, Sissel (2001) “Statlige målsettinger og lokale interesser i



promise of more tasks and responsibilities, if these are not backed up with more resources. *“They would rather have money! One of the reasons for the new Miljøprogram is that we have instituted a range of control mechanisms and paper-work the later years, which is not popular at the local level. The municipalities need the discretion to provide local projects with some kind of positive economic rewards”* (Informant, LMD) Material gathered through BioScene and other projects suggest that the population in the municipalities is not too interested in biodiversity issues, hence the local administrations do not see this as a priority. *“The expressed desire for more responsibilities probably comes from the local political actors, and not from the local administration. New responsibilities would increase the demand for competence locally, and this would probably vary between municipalities as knowledge is based on the background and knowledge of individuals in administrative bodies”* (Informant, FMLA Oppland). And; *“There is not too much interest in biodiversity issues. Some people are very interested and we have arranged a number of information meetings. Experts explained the importance of specific species, and this is of course interesting. (..) But machines are probably more interesting for farmers than tiny plants”* (Informant, local authorities Lom.)

One-third of Norwegian municipalities have less than 3000 inhabitants, and could not be expected to have a fully equipped local offices with total knowledge of biodiversity challenges in their communities. Two possible routes could be followed in order to achieve this level of competence; either increased co-operation between municipalities and/or a strengthened regional level acting as competence-providing partner in complex issues. Biodiversity issues are normally similar within each county and we could expect the regional level to be a source of competence in this respect. *“...and the regional level will be even more important when these environmental tasks are delegated to the local level, as a supporting service in complex matters. It would be a coincidence if a specific municipality has biodiversity relevant competence beyond a minimum level. We invite small municipalities to co-operate at some level in order to collectively acquire competent people, and a sufficient level of resources.”* (Informant, LMD) *“Larger municipalities could design a sufficient apparatus for effective administration of these tasks”* (Informant, FMVA Oppland).

### ***Local level adjustments in Scotland***

Asked whether there are difficulties implementing a nationwide scheme, the SEERAD contends that: *“there has to be some mechanism to treat applications fairly, but there is also an economic limit. Everybody knows the rules, based on the ranking system. Different areas have their local BAP priorities. There is some flexibility on a site-by-site level, and in an ideal world there should be site specific level prescriptions, but realistically there is no possibility for that”* (SEERAD, Inverness). The national SEERAD agency backs this view by saying: *“No, these schemes are nationwide and should be treated similarly all over. Probably some SNH-initiated projects could be locally based. Species mentioned in the UKBAP will of course vary around the nation, but there should not be any problems coming up with enough species in the application”* (Informant, SEERAD Edinburgh). Asked whether farmers only maximize their own self-interest or see some overall national goals, an informant states that: *“I don’t think it is so altruistic. It is a complementary thing. If it suits what the farmer is trying to achieve, and it suits the national interest, it will happen. If not, the farmer will do what suits his business best. It must fit in with the way he is trying to run his farm”* (SEERAD, Inverness).

We find public bodies at both national and regional level, with both “ministerial” and regional offices through SEERAD and SNH, while the local implementation of AE schemes is supported by relevant partnerships in each area. These could be NGOs like NFUS and FWAG or public bodies like the National Park Authority in the specific area. One great advantage with this organization is that one can rely on already established structures to communicate changes in regulations to intended recipients. There are two good examples in the current material. Firstly, the Farming and Wildlife Advisory Group, with its local offices that provide farmers with good information relating to the interpretation of regulations in the schemes and suggestions on how to apply for grants. These offices are in close contact with the users, and hold an invaluable position as a first line of consultation. The other example is the Cairngorms National Park Authority, which in some regards works as a messenger; both as a joint communicator for opinion in the area, and as an instrument for central agencies to get information out to the local areas. Such local partnerships could be a reasonable way of organising this work, and something that Norway might consider when the local level’s influence in these processes is increased.

After the devolution of power to the Scottish parliament, we could expect the following shift

in orientation of the main Scottish policy actors: *“Local governments will have a particularly close relationship with Edinburgh especially when it comes to the distribution of grants and regulatory politics. Local government’s relationship with London is likely to diminish, if only because much that constitutes central-local relations will involve relations between the Scottish Office and local government. The “centre” in this relationship is somewhat ambiguous: at times London will be the centre but, from a local government perspective, Edinburgh will be the centre. (...) But equally, there will be decisions taken in Brussels and London affecting local government. This will leave considerable scope for the “street level bureaucrats” at local level to influence matters”* (Mitchell 1998, p 76). In addition: *“Increasing contact (directly) between local government and the European Union has been noted in recent years”* (ibid). Some concrete results are visible from these processes of devolution. One is that: *“...there have been established some local initiatives (liaison groups) to focus attention, but concrete devolution of real power has maybe not happened. More devolution will probably work both ways. Local management would lead to less even-handed management”* (SEERAD, Inverness). Local initiatives however often come into conflict with UK and European regulation, as: *everything is done within the framework of European Union and the CAP system. London has devolved some responsibilities to the Scottish parliament, and one could work within this framework. We have tried to design some support schemes for additional work on fencing and ditching, and discovered that we were in breach of the overall agreements on national support, over how much assistance nation states are allowed to give to farmers. It is difficult to design schemes that solve local challenges that do not come into conflict with this framework* (Informant, SNH)

As for Norway, the question of competence at local level also comes into consideration, and the informational work of e.g. FWAG is put forward as crucial: *It (the RSS scheme) is very complex, and they complain about that. Advisors like FWAG are essential. It is a difficult system to give advice about. The system of points has changed a lot and they cannot know what will be relevant in the future* (Informant, NPA). The design and effectuation of schemes seem to be quite rigid, as: *...they (the local level) do not have a great deal of scope to affect the schemes in themselves. Local BAPs could be affected by participating in the definition of habitats and species that should be prioritised. Edinburgh is very much in control of the actual scheme (...)We want the National Park to participate in spending these resources, and giving advice on initiatives. This could be related to the trend of subsidiarity in the EU* (Informant, NPA.) And, *“It can be. Because of the points system, they get specific points for*

*specific activities, and some felt that it was biased towards the eastern parts - the more arable parts. Now they give points to some of the typical kinds of output in the west, so it is probably more balanced. The LBAPs also come into consideration. In the points system you score on local biodiversity and habitats. It makes it more fair. Very difficult to make it completely fair. You would have to have a number of schemes, and that would become administratively inefficient” (Informant FWAG). “The regional variation is significant here in Scotland, from north to south, from east to west, from mountains to flatlands. The points system was targeted towards livestock in the first designation. Now the system is swung back to arable land(...)There must be some kind of system where local administrators could adjust grazing dates and harvesting dates according to climate and season. There is a lack of flexibility here at the moment” (Informant NFUS). Asked whether national policy-makers take local diversity into account, an informant says: “They do want to have a simple system, but they accept that local diversity exists. The head office in Edinburgh seeks a simple system. I want to see more consideration of local specialities. The dates are different in Shetland and on the flatlands in the south” (Informant, FWAG).*

#### **4.6. Main conclusions on the comparison of the two cases:**

The implementation of AE schemes in Norway and Scotland has been assessed in this chapter through official statements and interviews with key actors in the two administrative areas. Established implementation theories (Winter 2001, Weimer and Vining 1999, Ripley 1985) suggest that every decision is influenced by a set of factors, leading to an outcome that normally differs somewhat from the intended target. In this report the influencing factors are program theories, use of policy measures, horizontal and vertical relations, and adjustments at local level. Conclusively, the question is what similarities and differences exist in the Norwegian and Scottish systems, with respect to the four different factors in an implementation study. The systems are surprisingly similar with respect to specific targets, use of policy instruments and design of actual schemes. The main differences are the level of delegation of power, the “bureaucraticness” of the administration and the presence of NGOs in the implementation part of the policy process.

While intensification is a threat to the Scottish landscapes, this could be seen as a desired development in some parts of Norway. Scottish farming is based in a European regime where the goal always has been to intensify production of agricultural products, thus leading to

abandonment of unproductive areas in addition to a tendency towards over-use of productive land. The main threat to biodiversity in Norway is the regrowth of outfields, a development the current policy regime is challenged to take into account. One common element in both countries is the scientific argument for increased variation of production methods, which could lead to greater variation in biotopes and scenic qualities, hence greater biodiversity. Diverse use of landscapes with a variety of livestock provides rich landscapes with a range of habitats with many species (both plants and animals). Biodiversity is the most important environmental argument for the upkeep and support of farm structure in both Norway and Scotland.

There seem to be a high level of acceptance of the international definitions of biodiversity in the two cases studied. The national level provides the overall aims and designs of the schemes, while the lowest levels are given a limited degree of discretion to define local priorities and variations in the implementation of schemes. National agencies provide the scientific logic for landscape use and biodiversity-enhancing practices, relying on targets set in key policy documents. The local level calls for clear, simple and targeted schemes to foster the desired activities, as implementation of AE schemes is hindered if it is based on complex administration and detailed paperwork. Nevertheless, most interview objects communicate the sense that interest and knowledge surrounding biodiversity challenges is impressive, bearing in mind the complex nature of these topics. Both structures seem to adopt many similar solutions to these challenges through a structure of combined policy measures based on economic rewards and informational work. The design of the six schemes in the two nations follows the same logic in at least four aspects:

- Strong national leadership in the policy-making phase.
- A heavy reliance on financial rewards as an incentive for change.
- The notion of biodiversity as a scientifically-based target
- The local level playing a crucial part in successful implementation.

The overarching intentions of the schemes are reasonably similar in the two structures. Phrases like "*environmentally friendly practices*" and "*benefits to the environment*" are typical for describing what the schemes are meant to accomplish. One crucial distinction between the two systems is the Scottish emphasis on long-term projects. Farmers are invited to apply for grants based on projects with duration up to ten years, while the Norwegian system focuses on per acreage support from year to year, or specific projects of shorter duration. The field of environmental policy is complex, and the need for long-term obligations is evident. Targeted,

focused and comprehensive solutions are the only strategies if one seeks to counter the threats to biodiversity degradation. Although statements about “*biodiversity richness*” and “*environmentally friendly practices*” often are vague and blurred, they are included in the reasoning behind rationale for the six AE schemes in Norway and Scotland. The interview objects in this study express agreement with this reasoning, but a certain level of insecurity about the actual meaning and content of these expressions could be observed. Most actors, both in administrative positions and among users, express a desire for these schemes to provide visible outcomes to the production, landscape and multifunctional aspects of farming.

When it comes to the use of policy measures, both structures are dominated by economically oriented schemes. These payments form a necessary share of farm income in both Norway and Scotland, and both small- and medium-sized holdings rely on environmental subsidies as a crucial part of their income. In addition to the economic orientation of the AE schemes, informational and juridical measures play an important role as a framework for the targeted schemes. Informational work intended to highlight the importance of biodiversity qualities, and juridical guidelines for land use and production standards create a foundation for the implementation of biodiversity-promoting schemes. Both AK, STILK and Miljøprogram have a considerable economic effect, and contribute a significant portion of the income of Norwegian farmers. The STILK and the Miljøplan also contribute to the educational role of environmental policy in the agricultural sector. Farmers are required to carry out a significant amount of work with the registration and identification of environmental qualities on their farms, hence improving their knowledge of the relationship between certain practices and their environmental consequences. The Scottish schemes have a longer time-horizon, as they (the ESA scheme) were open to applications over a number of years, while the Norwegian counterparts normally led to yearly payments based on single applications. Environmental issues are normally of a complex nature, leading us to suggest that the Scottish approach is more fruitful.

The administrative structures rely on the good will of people in the businesses, and control is only carried out as spot checks. A comprehensive system of reporting and surveillance of the actual activities of farmers would be more costly than the benefit of breaches discovered, thus some level of lenience is accepted in the two structures. Applications for these schemes are subject to control from the authorities, and juridical punishment is a possible sanction if the practices do not comply with the statutes. More important is the informational part of the

schemes, which apparently have become more important through the years. Both the Miljøplan and Miljøprogram in Norway include some level of paperwork and mapping from the applicants. These processes are meant to serve educational purposes, an aim that also applies to some degree for the Scottish system.

The most visible difference between the two systems is the Norwegian three-level structure of administration compared to the two-level structure in Scotland. The Norwegian system is still clearly bureaucratic with a hierarchical relationship between public agencies at different levels. The Scottish system appears more flexible, where relevant agencies are included based on their resources on a given topic or their importance in a specific region. This could be described as a structure influenced by the notion of multi-level governance, where horizontal networks are designed to solve challenges within a certain sector. Anyway, the interview objects in both nations indicate that biodiversity-enhancing schemes are designed at national level (in compliance with international obligations), thus suggesting that we are dealing with a policy sector dominated by top-down oriented practices. Both national and regional levels in the two nations are similar with a high level of co-operation between agricultural and environmental agencies and bodies. The local level is organised somewhat differently as the local level in Norway is administered by public bodies (farming offices), while the local level in the Scottish case is dominated by support agencies of a more pragmatic NGO-based origin. Examples could include the work of local advisors in FWAGs and the role of partnerships that consist of public and private actors. While the farming offices in Norway have daily contact with farmers, the lowest official agency in Scotland is the regional SEERAD office. Thus, the Scottish administrative structure is more influenced by non-governmental actors and agencies in the implementation of the relevant schemes. The first line of administration in Norway is the local farming office (normally one in each municipality), while farmers' unions, interest groups and pragmatic conglomerates are more prominent in the Scottish structure. Of course, the farmers' unions and local networks are included in Norway as well, but they are not to the same extent formal parts of the implementation structure. With this background it could be argued that the Norwegian system is clearly bureaucratic, while the Scottish system leans towards organization better described by the notion of governance. The notion of vertical governing suggests that the authority in a case must be placed at the most reasonable level of administration. It could be difficult to identify the most reasonable level of administration in these cases as the argument in a decision about environmental issues often is complex, in addition to the ever-present dimension of national equality vs. subsidiarity. The current trend

suggests that municipalities are getting more responsibility in these processes, but regional and national levels still have significant influence through their superior portfolio of resources and competence. The transition of information is also helped by the fact that administrators and bureaucrats have informal networks of contact because of similar career patterns and co-operation in previous projects.

National equality is a highly rated democratic principle in most developed countries and tends to lead to rigid structures with excessive control mechanisms to ensure equal treatment in equal cases. Although national equality is not a stated target in the two structures, the overall legal framework seems to be rather stringent. Regional dissimilarities in respect of climate, tradition and production methods should require different institutional arrangements, but the AE schemes have the same purpose and mechanisms throughout the two nations. The principle of subsidiarity has opened up the possibility of some level of prioritisation between and within regions, and several informants have hinted that this will increase in the years to come. One notion that draws the argument in a slightly different direction is that of the street-level bureaucrat. This focuses on the knowledge, competence and strategies of the bureaucrat closest to those affected by AE schemes. The argument in this report suggests that there will be great differences in levels of competence; hence varying strategies of street-level bureaucrats would lead to differences in the implementation of AE schemes. Norway has local agricultural offices in most of the 431 municipalities, while the Scottish system has placed the lowest level of public responsibility at the SEERAD regional offices. The advisory service that municipality offices perform in Norway is to some degree provided by NGOs in Scotland. Both these strategies could have advantages, as public agencies in Norway could see agri-environmental challenges in relation to other local objectives, while the Scottish model provides farmers with loyal advisers that are “on their side” in the application process. The main issue with respect to local implementation would however always be the level of competence of those who are advising farmers of the steps that must be taken to achieve a successful outcome with a targeted environmental effect. The stringent Norwegian strategy with public bodies and the more flexible Scottish approach with NGO advisors in relation to regional public supervision are two possible routes to good environmental practices, and the material in this study is not capable of pointing to a preferred strategy. Farmers applying for the six schemes assessed in this report expect to be treated similarly throughout the two countries. In Norway, the implementation of decisions within biodiversity management in the agricultural sector have traditionally been assigned to the three-level administrative system of



national, regional and local agencies. The Norwegian system has in later years responded to international calls for subsidiarity, and more power is being transferred to local authorities. Some municipalities have taken the opportunity through this change to include some interest groups in the task of creating local adaptations to the regulatory measures, but this does not seem to be a consistent nationwide process and is mainly based on local activism and interest.

External factors are also important in an implementation study. The policy field of biodiversity management does not exist in a vacuum, and the relationship to other sectors, the physical infrastructure and institutional framework are of course relevant when we assess the range of AE schemes in two European democracies. This chapter has focused mainly on the implementation of AE schemes, through an analysis of administrative challenges when a scheme is put into practice. This is placed in the wider context, and elaborated, in the final chapter; “Conclusions.”

## 5. CONCLUSIONS

*Policy analysis is: any type of analysis that generates and presents information in such a way as to improve the basis for policy-makers to exercise their judgement...In policy analysis, the word analysis is used in its most general sense; it implies the use of intuition and judgement and encompasses not only the examination of policy by decomposition into its components but also the design and synthesis of new alternatives.* (E.S. Quade in Dunn 1994, p 61f).

### 5.1. Implications and improvements

The main aim of this report was to illuminate challenges relating to the design and implementation of agri-environmental schemes in Norway and Scotland. Chapter 2 provided the theoretical and methodological approaches to the present report. Policy was chosen as the theoretical departure, and specified through a discussion of contributions from the vast literature on implementation and evaluation studies. Four analytical categories were identified as the organizing concepts; the program theory, the policy measures, horizontal integration and vertical governing and adjustments at the local level. A comparative case study of two Western structures, Norway and Scotland, was selected as the methodological strategy. The empirical material consisted of statements from key policy documents and interviews with a number of informants in the two case nations. Chapter 3 provided a descriptive presentation of the international discussions, national adaptations and local implementation of biodiversity-enhancing efforts in the agricultural sector. The logic behind these schemes, the choice of policy instruments, the administrative structure in which they are implemented and the inclusion of the local level were analysed in chapter 4. This section highlights the main findings in the assessment of the AE-implementing structure through the four analytical categories, while the next section will provide more overarching recommendation for future policy making.

#### ***The need for a simple program theory and targeted schemes***

There seems to be a high level of consensus about the central definitions of the term biodiversity. The foundation for an effective biodiversity policy is laid here. Although some users and interest groups have different agendas, leading them to emphasize specific aspects of biodiversity, the main policy makers and policy implementers share a common view of the state of, and mechanisms behind, biodiversity. The notion of a program theory as a theoretical

approach to a study of the implementation of AE schemes is relevant, as the clarity of the link between an identified problem and its suggested solution must be evident to secure the inclusion and support by crucial stakeholders. Environmental problems are often the result of a complex combination of causes, and it is challenging to identify a plausible program theory.

### ***Biodiversity enhancing activities through economic incentives***

The six AE schemes assessed in this report rely on measures based either on economic incentives or on informational instruments. The AK scheme and STILK/SMIL regulation in Norway provide farmers with financial grants if they agree to implement specific management schemes connected to agricultural land or specific production methods. The Miljøplan has an informational basis. The three schemes have juridical aspects as well, and combined with conservation issues and land management legislation, the farmers are exposed to a system of varied measures designed to foster sustainable use of the landscape. The Scottish system is surprisingly similar, through a general scheme (RSS) with significant economic importance for the farmers based on a prescription requiring more informational effort connected to good farming practices.

The use of policy measures requires a fine tuned understanding of the balance between hard measures with the possibility of sanctions, and soft measures with the prospect of reward for interested parties. A balance between these strategies must be found and established. Schemes based on threats and extra burdens will be unlikely to generate extra interest among farmers. Farmers that find the schemes interesting and necessary are likely to enter these schemes voluntarily and contribute the necessary input in the coming years. This positive approach has been firmly established with the design of informational schemes, where farmers are supposed to discover the environmental qualities of their farms and the importance of the area they live in.

### ***Biodiversity management – a structure dominated by international and national policy-makers***

The top-down domination within these processes is evident, as national policies are shaped by international obligations rather than local needs. Norway is administered by a three-level structure with public bodies at national, regional and local level. Scotland on the other hand has a public structure with two levels, the national and regional. There are local councils as well, but they are only concerned to a limited degree in processes of landscape and

biodiversity administration. Semi-public or non-public agencies are more visible in the Scottish system than in Norway. Agreement over targets and administration of biodiversity-enhancing activities seems to be quite high within the horizontal levels in the two structures. The Norwegian and Scottish structures for implementing AE schemes are limited in extent and numbers, thus the communication lines are reasonably effective. Personal contacts, similar educational backgrounds and previous professional experience foster a smooth approach to potential problems. There is a high level of compliance within each administrative level, and informants from different public agencies indicate a predominant climate of agreement with existing structures. We could therefore conclude that the notion of horizontal integration is relevant in both cases. One must ensure that general responsibility for supervision of these schemes is placed at a level that has enough experience and administrative resources to guarantee an active approach towards these issues. The need for co-ordinated efforts and statements from key stakeholders seem to be crucial in these processes, and both nations have produced a number of key policy documents in the first half of the 1990s. There is an evident need for a less hierarchical, more open and inclusive use of resources at all levels. The interviewed actors state that there is broad understanding of key internal threats to biodiversity in the two countries, and their reasonable solutions. The main differences appear over the choice of agencies and levels to have formal responsibility when schemes are implemented. The notion of vertical governing is thus relevant in both cases, although Norway and Scotland have chosen somewhat different solutions in that respect.

### ***Powerless SLBs with a positive relation to farmers***

The street-level bureaucrat (SLB) does not have a significant opportunity to exercise discretion. The implementation of AE schemes is dominated by national regulations designed by central agencies, and nationwide equality is a goal in both case structures. Some of the policy documents indicate that regional diversity is a target in biodiversity policies, but the fact is that the local level is not able to exert much influence on the actual implementation of these schemes. There are two main reasons for this. First is the influence of policies in fields other than biodiversity management, where legislation about land use and planning reduces the scope for the local level to exercise discretion. The other reason is the lack of resources at local level. Biodiversity management requires a high level of knowledge of biodiversity qualities in a given municipality/county, and only a limited number of Norwegian municipalities or Scottish local councils have the manpower and technical resources to exercise a proactive approach to these challenges.

## **5.2. Lessons for future policy-making**

Environmental issues have had a roller-coaster ride in public opinion during the last three or four decades. From being high on the agenda following important turning points in the political debate often linked to environmental disasters, to being completely ignored by the media for longer periods. The first environmental concerns questioned the use of pesticides, atomic energy and polluting elements in industry and agriculture. The field developed into discussions on overpopulation, resource management, food safety and transportation. Gene technology, the greenhouse effect, the destruction of the ozone layer and the maintenance of biological diversity have been the latest additions to this list of important environmental concerns. As outlined in chapter 3, the issue of biological diversity evolved from being a scientific discussion into formal political statements with the Convention on Biological Diversity in 1992. Since then, biodiversity concerns have been integrated into national policies, and implemented into society as specific schemes aimed at a number of environmental targets. National authorities have accepted the basic premise of biodiversity management and established a number of initiatives that have been put into action by regional and local authorities. Biodiversity has become an important argument in the case for the maintenance of some support for agricultural production, support that has been questioned under the free trade approaches made by the EU and the WTO. It has been proposed that an extensive and varied agriculture produces priceless environmental goods, materialised through a higher level of biodiversity, which in turn could produce additional income from adjacent activities and tourism.

As outlined in chapters 1 and 2, the main aim of this report was to assess the design and implementation of biodiversity-enhancing schemes in Norway and Scotland. An additional aim was to suggest some improvements to the current regimes, based on the vast evaluation literature and experience from the present study. The final paragraphs of this report will present some recommendations for policy-making and policy implementation for the years to come.

### ***The need for knowledge in future policy design***

Allocating more resources to mapping of biodiversity qualities requires political will, both on the international stage and even more importantly within national structures. Trade

regulations on the international stage, national adoption of international conventions, general agricultural policy in a country and local differences within a state could affect the long-term use of agricultural land, and thus could have an effect on biodiversity in these areas. In any case, the design of future AE schemes must be based on the highest possible level of knowledge of the causal mechanisms between economic, societal, scientific and agricultural production factors in a given area, and their ultimate effect on biodiversity.

*“Much of the international effort on incentives has gone into the development of instruments designed to assure efficiency in the allocation of environmental resources within safe bounds, including harvesting or hunting quota, emission caps or “bubbles”, time-limited rights or “seasons””(Perrings et.al.1995 , p 308).*

The program theory behind these schemes has normally concerned some scientific level of indicator species, which could be difficult for lay people to comprehend. The design of new schemes should be based on experience from earlier efforts, but with increased focus on how the design is presented to the parties involved. IOs from interest groups and NGOs have, not surprisingly, more specific interests in these processes, and focus on narrower aspects of biodiversity enhancement. Farmers’ unions have an interest in the economic framework for agricultural production. Advisory groups seek predictable routines for the application of management regimes. The environmentalists focus on specific habitats, areas or species as crucial indicators of the state of biodiversity. Policy-makers need a high level of knowledge of the mechanisms behind biodiversity to be able to design effective schemes. Mapping of environmental qualities like biodiversity requires an abundance of resources, both economic and technical. Mapping and identification of biodiversity qualities is a young science, and we have some way to go before the level of this work is acceptable. Estimates of biological diversity are very imprecise, as:

*“The global estimate of species ranges from 7 to 20 million, although only 1,75 million are identified. This knowledge is sufficient for the establishment of measures to secure the global, national and local biological diversity. The Convention (CBD) states that lack of scientific knowledge must delay the work towards establishing suitable measures towards the threats to biological diversity” (White Paper 58 1996-97, section 5.1).*

Botanists and biologists are working tirelessly to uncover the strength and extent of species, but the astonishing size of this task calls for increased effort to establish more knowledge of biodiversity, globally, nationally and locally.

### ***AE schemes – significant income for future landscape producers***

On the surface, this biodiversity argument seems to be an idealistic concern for the

environment. But the promotion of environment as an excuse for more rational thinking based on self-interest linked to income level and financial security looms in the background. At first sight, the environmental argument for biodiversity management is important, but the economic importance of these schemes is equally prominent for farmers. We have moved away from the productivist era with high levels of support for agricultural production to a post-productivist era with support based on area, scenic quality and environmental importance. While farmers have lost much of their traditional income through production support, new types of scheme have to some extent mitigated the effect of the loss of traditional income. The farmer has become more of a landscape manager rather than a productive food supplier, a trend that is difficult for many elderly farmers to accept. The trend of support for agricultural production is steadily changing from being production-based to supporting the production of environmentally-friendly practices. But there are two different premise-makers in this respect. Changes in the WTO system are important for the Norwegian case, while alterations in the EU are equally important for Scottish farmers. Both the WTO and EU are trying to decrease the level of direct production support due to its trade distorting effects. This is prodding the agricultural sector into producing other values; e.g. environmental goods or multifunctional qualities. Farmers are well aware of the environmental importance of their work, but need to be rewarded through economic channels. Official statements from national authorities express heavy dependence on the farmers' work because of the end-products of a well-kept landscape, a variety of food products and a sound environment. As in Norway, the climate and topography in many parts of Scotland are not favourable for large-scale effective farming. Traditional farming can only be maintained in the valleys and in a world of large-scale production, profitable farming activity is hard to maintain. Many farmers combine production with other jobs in other sectors –tourism being the most important. Anyway, most actors contend that they have to produce a self-sustaining income, and seek alternative ways to stability.

The following statement from a Scottish informant sums up the view on the economic importance of these schemes:

*“All the schemes are designed to provide ‘money for income foregone’ and not being purely paid money. It is a small incentive for joining the scheme (...) Farmer does not necessarily have to change too much. It is good to be paid for having managed it well in the past. Without the £3-5000 pounds, specially the later years with the BSE and the Foot-and-Mouth – Disease and so on, the additional income has been vital”* (Informant FWAG).

Until now, most farmers have shown remarkable adaptability and a positive approach to the

extended burden of regulations, paperwork and a diverse income structure, seeing the biodiversity focus as an option within the multifunctional perspective.

### ***Biodiversity administration – the call for Multi-level governance***

A key question in my report is what kind of structure is the most suitable when coping with environmental challenges generally and sustainability/biodiversity particularly. This lies within the boundaries of the concept of governance which could be defined as “...*the activity, process or quality of governing*” (Hague et al. 1998, p 5). Governance is not about structures of government, but focuses on the policies that are made, and the effectiveness with which they are carried out. Governance has traditionally been closely linked with the work of cabinets or governments. This is no longer the case in most Western democracies, as governments to a greater degree have given other public or private bodies access to this part of the policy process. The spectrum of challenges has increased, hence the number of possible solutions rises exponentially. Biodiversity is a rather new field of interest, and the mapping and supervision of biodiversity challenges calls for a new way of thinking. The authorities should rethink the exercise of traditional bureaucratic steering, while new patterns of co-operation between public and private bodies could be established. The following quote says something about the possible future in policy implementation: “*So the emerging pattern, in international and perhaps also in national politics, is rules without rulers, governing without government. In a word: governance*” (Rosenau 1992, in Hague et al. 1998, p 5). The need for an extensive network of political will, administrative capacity and voluntary participation is evident, if the goal is a well-founded, targeted and effective management apparatus. The tradition of Multi-level Governance (MLG) offers a new, open approach to the organization of management. The organization of actors, agencies, networks and institutions should be pragmatically designed with an aim of targeted problem-solving. This is in opposition to the bureaucratic approach in the Norwegian structure and the interest-group informed structure in the UK. A by-product of the MLG approach is the increased level of learning, as the organization of a problem-solving structure is unique each and every time. As biodiversity management calls for the combination of a range of resources to solve complex challenges, MLG could provide the policy sector with relevant input.



### ***Devolution of power – the challenge of equipping the local level with competence and resources***

Devolution of tasks in biodiversity management is desirable, but must be backed up by a structure with enough competence to handle these issues. Arguably, there are several actors and groups that have relevant knowledge and can contribute to even better management of biodiversity. The regional and local authorities are under some strain, because of an alleged lack of resources. These public agencies could be supported by other groupings, which can take some of the burden through the inclusion of NGOs and other interests groups. This could contribute to a higher level of active participation of those actually influenced by these policies, thus better solutions could be achieved.

It is probably impossible for all 430+ Norwegian municipalities to be given responsibility to implement AE schemes, without support from regional agencies or increased co-operation with neighbouring municipalities. We cannot expect all municipalities to solve these issues by themselves. The Scottish solution with responsibility placed at regional level, assisted by local partnerships and NGOs, could be a preferable solution. The municipalities do not seem too excited when they are presented with new tasks and increased responsibilities. More pressing issues like welfare services, infrastructure and care of elderly are understandably prioritised. The importance of environmental goods is presented as significant, thus it should be possible to do both. One solution could be to place some of these resource-intensive tasks in designated bodies at the regional level. These agencies could provide small local units with general knowledge of specific priority areas in the region, and suggest targeted efforts in relation to the development of future agricultural areas. Local authorities could use this knowledge as a base for their own unique solutions, based on needs in the local community.

There is significant regional variation in Norway and Scotland due to climatic, geographical and historic factors and differences in agricultural production practices. Hence, varied environmental qualities have evolved, which require variations in maintenance and support. A flexible structure of efforts should therefore be implemented, supported by a range of policy instruments. The general structure of economic support for environmentally-friendly practices must be maintained, but some level of local variation must be accepted. But:

*“the delegation of power will lead to variation between municipalities, and could provide a higher level of accuracy through local knowledge within local*

*administrations.” and “we wish for some level of difference, because things are different from the beginning. The Ministry accepts some differences, while the farmers’ unions are frightened by this perspective. They meet the farmers face-to-face and equality is important for these stakeholders.” (Informant, LMD.)*

The rescuing of rural agricultural areas in the two nations is based on a higher level of integration between the agricultural segment and other sectors, and this could only be achieved if one succeeds in promoting additional activity and income in connection with traditional farming. Such integration could probably only be achieved if there is some level of flexibility for local solutions, which reflects the specific qualities of each area.

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## 7. APPENDICES:

### APPENDIX 1: LIST OF ABBREVIATIONS

AE(-scheme):	Agri-Environmental (Scheme)
AK:	Areal og kulturlandskapstillegg
BAP:	Biodiversity Action Plan
BC:	The Biodiversity Challenge
BD:	Biological diversity
CAP:	Common Agricultural Policy
CBD:	Convention on Biological Diversity
CSD:	Commission on Sustainable Development
DEFRA	Department for Environment, Food and Rural Affairs
DN:	Direktoratet for naturforvaltning
ESA:	Environmentally Sensitive Area
EU/EEC:	The European Union
FMLA:	Fylkesmannens Landbruksavdeling
FMVA:	Fylkesmannens Miljøvern avdeling
FWAG:	Farming and Wildlife Advisory Group
GATT:	General Agreement on Trade and Tariffs
HI:	Horizontal Integration
IO:	Interview object
ISS:	Institutt for Sosiologi og statsvitenskap (Department for Sociology and Political Science, NTNU-Trondheim)
LBAP:	Local Biodiversity Action Plan
LD/LMD:	Landbruksdepartementet (Ministry of Agriculture, Norway)
LFA:	Less Favoured Area
MD:	Miljøverndepartementet (Ministry of Environment, Norway)
MLG:	Multi-Level Governance
NFUS:	National Farmers' Union Scotland
NGO:	Non-Governmental Organization
NKR:	Norwegian Kroner (monetary value)
NPA:	National Park Authority (e.g. Cairngorms NPA, Scotland)
NTNU:	The Norwegian University of Science and Technology (Trondheim, Norway)
OECD:	Organization for Economic Co-operation and Development
RSPB:	The Royal Society for the Protection of Birds
RSS:	The Rural Stewardship Scheme
SEERAD:	Scottish Executive Environment and Rural Affairs Department
SLF:	Statens Landbruksforvaltning
SMIL:	Spesielle miljøtiltak i landbruket
SNH:	Scottish Natural Heritage
STILK:	Spesielle tiltak i landbrukets kulturlandskap
UK:	United Kingdom
UN:	United Nations
UNCED:	United Nations Conference on Environment and Development

UNEP:	United Nations Environment Programme
US/USA:	United States/United States of America
VG:	Vertical Governance
WTO:	World Trade Organization

## APPENDIX 2: GENERAL INTERVIEW-GUIDE:

(Adjusted for each interview with respect to the position and role of the interview object)

A: NORWEGIAN VERSION:

INTERVJUGUIDE: NASJONALT NIVÅ: NORGE

Info om hovedfag statsvitenskap, hovedfagsoppgave, Bygdeforskning og BioScene

TID: Ca 70 minutter

### 1. INNLEDNING (3 min)

- Anonymitet
- Hva skal data fra intervju brukes til?
- IO's mulighet til å se hva jeg bruker. (kun dersom de spør)
  - Kun sitater som jeg bruker i ferdig tekst...?
  - ...eller hele transkripsjonen?

### 2. PERSONLIG (3-4 min)

- Navn
- Bakgrunn
- Stilling
- Arbeidsoppgaver
- Tidligere/annen relevant erfaring

### 3. INSTITUSJONEN (LD/MD/SLF) (5 min)

*(drei intervjuet over mot tematikk ganske fort, ikke la det skli ut med generelle diskusjoner.)*

- Hovedoppgaver (generelt)
- Din seksjons arbeidsoppgaver (spesifikt)
- Pågående prosesser (generelt)
- Viktige endringer senere tid (generelt)

### 4. BIOMANGFOLD (10 min)

- Din (seksjonens) forståelse av begrepet biomangfold?
  - Forskjell institusjonen og andre institusjoner/grupper?
- Din (seksjonens) tilknytning til spørsmål om biomangfold?
  - Forskjell institusjonen og andre institusjoner/grupper?
- Viktige aspekter innen debatten om biomangfold?
- Pågående prosesser/prosjekter/utredninger koblet til biomangfold (i landbruket)
- Har dept./dir en bekymring når det gjelder biomangfold? Ser man at det er en kobling landbruk/kulturlandskap/biomangfold/gjengroing?

### 5. VIRKEMIDDELBRUK (20 min)

*(prøv med tredeling av virkemidler som et utgangspunkt, drei over på enkelttiltak dersom det kjører seg fast.)*

- Hvilke virkemidler har dere for å implementere miljøverntiltak i landbruket (følg opp: juridisk/økonomisk/informativ)
- Hvilke virkemidler ser ut til å (ikke) fungere, og hva fungerer best til hvilke formål? Trender/endring over tid?
- Noen utvikling/forskning/kunnskap i den senere tid om hvilke virkemidler som bør benyttes til hvilke formål.
- Kommentere eksisterende tiltak virkemiddelbruk og effekt:
  - Areal og kulturlandskapstillegg (økonomisk virkemiddel)
  - STILK (økonomisk virkemiddel)
  - Områdetiltak (informativt virkemiddel)
  - Vernetiltak (juridisk virkemiddel)
  - Miljøplan (informativt virkemiddel)
- Andre tiltak som IO mener er relevante
- Momsordningen (under 30000 i inntekt ikke kvalifiserer for støtte og kulturlandskapstiltak) er dette et problem?
- MD: Hva med rovdyrproblematikk?

#### 6. IMPLEMENTERING/FORVALTNING AV TILTAK (20 min)

*(både generelt og spesifikke ordninger for bevaring av biomangfold i landbruket)*

*(få med forhold til alle tre nivåer. MEN: "lokal respons" er viktigst!!)*

- Kan du si hvordan implementeringprosessen av miljøspørsmål (biomangfold) i landbrukssektoren foregår?
- Hvem initierer prosessene?
- Hvem er mest aktive? (Positive/negative)

#### FØLG OPP MED:

##### NASJONALT

- LD/MD/SLF kobling til andre nasjonale organ
  - Forskjeller i hvilke type tiltak/virkemiddel som legges til hvilke organ/nivå
  - Hvilke(t) muligheter/ansvar har de ulike leddene i implementeringskjeden til å påvirke/gjennomføre? Klare direktiver/ Ordninger med mulighet for skjønnsvurderinger?
  - Praktisering av et "subsidiaritetsprinsipp" der forvaltning legges til et så lavt nivå som mulig.
  - Nasjonale hensyn (effektivitet) versus lokale tilpasninger (legitimitet)
  - Kamp mot/Samarbeid med andre departementer?
  - Direktoratets rolle (samspill/motpart) Politikkstyring vs Fagorganer
  - Sterke interessegrupper (f.eks Bondelag/Bonde og Småbrukerlag og KS) innvirkning.
- Trender i Europa tyder på at NGO'er blir stadig viktigere. Ser man noe til dette i Norge?

##### REGIONALT

- LD/MD/SLF kobling til regionale organer
- Fylkesnivåets ansvar (f.komm/f.mann)
  - Fylkesnivået som bidragsyter for kommunene og/eller nasjonalnivåets forlengede arm.
  - Ny oppgavefordeling
  - Ny organisering (regioner) fylkesnivåets evt. nye rolle

## LOKALT

- LD/MD/SLF kobling til lokale organer
  - Kommunene...på lag med nasjonalt/regional nivå, eller motstander?
  - Sterke interessegruppers (f .eks Bondelag/Bonde og Småbrukerlag og KS) innvirkning. Blir de tatt med i prosessene, eller lobbyering.
  - Politisk press, ulike satsningsfelt alt etter hvor politisk maktsentrum ligger til enhver tid?
  - Medias rolle (Bruker dere media aktivt til å fremme kampsaker? Benytter andre grupperinger media aktivt til å vinne grunn?)
  - Nasjonale hensyn (effektivitet) versus lokale tilpasninger (legitimitet)  
→ ser lokalnivået mulighet for å avstå rettigheter/muligheter med hensyn til regional/nasjonal helhet, eller søker det alltid maksimering av egen nytte?
  - Kan ordninger/tiltak gjennomføres/innføres ved å støtte seg på idealisme/dugnadsånd, eller må alle aktører se fortjeneste i et nytte-/kostnadsregnskap?
  - NGO'er mer tydelige?
- 

## 7.FRAMTIDEN (*vanskelig å spå, men det hadde vært interessant å høre noen spådommer om hva som vil skje i tiden framover angående bevaring av biomangfold i landbrukssektoren.*)

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- Internasjonale forpliktelser
    - FN (konvensjoner)
    - EU (-medlemskap)/handel/miljø/Natura 2000
    - WTO-forhandlinger
      - Landbruksproduksjon etter ulike bokser. Vil vi kunne argumentere for at subsidier av lavintensiv produksjon som noe essensielt miljømessig?
  - Nye norske tiltak/ordninger, for å tilpasse seg utvikling?
  - Scenarier (hva må gjøres for å oppnå hvert enkelt/hva er mest sannsynlig)
    - Business as usual (gradvis nedbygging i samme takt som nå)
    - Biodiversity enhancement (satsning på biomf-fremmende tiltak)
    - Managed decline (WTO-resultat)
- 

## 8. AVSLUTNING: (3 min)

- Takk for hjelpen!
- Mulighet for å komme med oppfølgingsspørsmål ved en senere anledning?

## B: ENGLISH VERSION:

### INTERVIEW GUIDE FOR THE SCOTTISH CASES

#### 1. INFORMATION ABOUT MY PROJECT

- Comparative study of the administrative structures of the implementation of agri-environmental schemes in Norway and Scotland.
- Connected to the EU-funded BioScene-project with an own UK team from Imperial College at Wye.
- Important themes would be the logic behind AE schemes connected to biodiversity in the agricultural sector.

Is it OK if we tape the interview? I would probably have enough work to keep up with your answers, so if we could tape it, it would help my further processing of the data. I will not mention your name in my written report, but somebody could of course guess the origin of some statements when they see who I have been talking to. If you want to say something controversial, I would be happy to stop the tape at that moment.

## 2. ABOUT YOU, AND YOUR ORGANIZATION

Could you please tell me briefly about your background?

Education and previous work with a relation to your current position?

What are the main responsibilities of your organization? What is its position in the administrative structure.

What are your responsibilities within this organization?

What are the most important current responsibilities and projects (mainly connected to environmental considerations in the agricultural sector.)

## 3. KEY CONCEPTS

The concept “Biodiversity”, is it high on the agenda in this organization, and what kind of work is connected to biodiversity issues in your day-to-day activities?

Do you have a clear view of the term biodiversity, and do you share this view with other key agencies/orgs in the administration.

The concept “Landscapes” or “Countryside landscapes”, is it high on the agenda in this organization, and what kind of work is connected to CL issues in your day-to-day activities?

Do you have a clear view of the term “Landscapes” or “Countryside landscapes”, and do you share this view with other key agencies/orgs in the administration.

## 4. SCHEMES

Could you please give me a brief description of the main AE schemes from your perspective?

ESA

RSS

(- OAS)

National Park Designation

Possibly Natura 2000

SAC

SPA??

Logic behind the schemes. Problem—Theory of how to achieve change? Success?

Do they seem to work as intended? Why/why not.

Intended side effects

Have they been adjusted during their existence?

Are any changes planned?

## 5. MEASURES

From my point of view one could mainly divide policy instruments into three main groups. Economic, Juridical and Informative.

The ESA, RSS and OAS seem to me to be economic instruments with a taint of informative enlightenment. Do you agree, or do you have a different view of the logic behind these schemes. What about juridical conservation measures like the National Park?

Natura 2000

## 6. THE IMPLEMENTATION PROCESS

Who initiates the AE processes? Where does the desire for changed activity come from?

How rigid are the above-mentioned schemes? What are the possibilities for bureaucrats at the national/local level to adjust these schemes to what they think/feel should be done?

Adjustment to local particularities

Do you feel that the bureaucrats at the national level seek uniform implementation of a scheme throughout the country, or do they have some sympathy for local diversity and different needs in different parts of Scotland?

Local agents: Do they mainly try to implement a scheme to the best advantage for their local community, or would they show loyalty to the national level if local sacrifice is required for successful implementation of a new policy?

What about London? What do they decide? Did something change when the Scottish Parliament was established in 1999 (?) Are they only legislators, or do they contribute financial support?

What about Brussels? What do they decide? How much of the financial support comes from the EU? LFA?

Is the principle of subsidiarity visible in the Scottish system? Both in Norway and in EU this principle seems to be given more weight. Are there any problems with trend in this direction?

How do you co-operate with agencies/organizations at your own level?

How do you co-operate with agencies/organizations at the national/local level?

How do you co-operate with farmers?

Do you feel that the AE schemes have legitimacy at the local level among farmers and others?

If you could identify one agency/organization in the implementation structure as crucial and totally necessary for successful implementation of AE schemes, who would that be?

Are environmental considerations prioritised in the day-to-day policy formulation, or do they come second to traditionally heavier sectors like energy, resource exploitation and

transportation.

Do local interest groups have a lot of power to influence these processes? Part of the structures, or outside the formal structures as advisers? Farmers, local businesses, tourism? Included in corporative structures, or do they have to go the way of lobbying in a pluralist system.

#### 7. WHAT ABOUT THE FUTURE?

What could we expect in the future? 10, 20 and 50 years ahead. Would there still be active farming in Scotland, Cairngorms? What are the main threats to the farming system?

Changes in the Scottish structure?

Changes in the UK structure?

Changes in the EU structure?

- Decoupling

- New member states

Changes in the WTO structure?

#### 8. THANK YOU!!

This has been really helpful, and this material will important for my further work.

You have given some of your precious time, and I am very grateful for that.

If I need answers of some follow-up questions I hope that it would be OK if I call, or send you an e-mail?