

# Sustainability Profile for



# North Sutherland



# CONTENTS

	Page
<b>Introduction</b>	<b>3</b>
<b>Goal 1: Making the most of natural and cultural resources without damaging them</b>	<b>3</b>
<b>Objective 1:</b> Protecting and enhancing natural resources and promoting their value (Includes key topics – sea; fresh water; land; biodiversity; management)	<b>6</b>
<b>Objective 2:</b> Protecting and enhancing cultural resources and promoting their value (Includes key topics – language; arts; traditions; sites/ monuments: management, interpretation)	<b>9</b>
<b>Objective 3:</b> Promoting sustainable and innovative use of natural resources (Includes key topics – agriculture; fisheries and forestry; game; minerals; tourism; marketing)	<b>11</b>
<b>Objective 4:</b> Promoting sustainable and innovative use of cultural resources (Includes key topics – cultural tourism; facilities; projects; products; events; marketing)	<b>13</b>
<b>Goal 2: Retaining a viable and empowered community</b>	<b>14</b>
<b>Objective 5:</b> Retaining a balanced and healthy population (Includes key topics – age structure; gender balance; health; population change; population total/ dispersal)	<b>14</b>
<b>Objective 6:</b> Supporting community empowerment (Includes key topics – community decision-making; control of natural resources; access to funds, information, skills, education, expertise)	<b>16</b>
<b>Objective 7:</b> Ensuring Equal access to employment (Includes key topics – range/ dispersal of jobs; training; childcare provision; employment levels; skills base; business start-up)	<b>18</b>
<b>Objective 8:</b> Ensuring equal access to essential services (Includes key topics – housing; utilities; services (Post Office, doctors etc); care provision (child, disabled, elderly))	<b>20</b>
<b>Goal 3: Reducing problems of remoteness by delivering local needs locally and reducing dependence on external inputs</b>	<b>22</b>
<b>Objective 9:</b> Improving the local market for goods and services (Includes key topics – local goods; local services; local markets; local retail/ wholesale outlets; local marketing schemes)	<b>22</b>
<b>Objective 10:</b> Promoting equal and effective access to goods, services and markets (Includes key topics – transport infrastructure; public transport; car ownership; fuel prices; integrated transport inks)	<b>24</b>



<b>Objective 11:</b> Providing an adequate Information Technology (IT) Resource (Includes key topics – IT infrastructure; access to IT; training; levels of use; levels of skill; levels of awareness)	<b>26</b>
<b>Objective 12:</b> Reducing reliance on imports and subsidies (Includes key topics – imported goods/ services; imported skills; levels of public subsidy; initiatives to reduce levels of imports)	<b>27</b>
<b>Goal 4: Avoiding harmful effects on other people, places and future Generations</b>	<b>29</b>
<b>Objective 13:</b> Supporting the wise use of energy (Includes key topics – renewable energy; energy efficiency: changes, initiatives and support for the above)	<b>29</b>
<b>Objective 14:</b> Promoting waste minimisation and management (Includes key topics – waste management; waste minimisation; recycling; levels of activity)	<b>31</b>
<b>Objective 15:</b> Supporting ‘green’ business and community initiatives (Includes key topics – green business; green labelling; product development; environmental management systems; awareness raising)	<b>33</b>
<b>Objective 16:</b> Promoting co-operation with other communities (Includes key topics – co-operative initiatives; inter-community links; rural-urban links; information exchange)	<b>34</b>
<b>Appendix 1 Supporting Data</b>	<b>36</b>
<b>Appendix 2 Gap Analysis – Relationship with Sustainability</b>	<b>75</b>
<b>Appendix 3 Methodology</b>	<b>91</b>
<b>Appendix 4 Bibliography</b>	<b>99</b>
<b>Appendix 5 Organisations and Individuals Contacted</b>	<b>102</b>
<b>Appendix 6 Proposed Indicators</b>	<b>108</b>



## INTRODUCTION

### 1.1 What is Dùthchas?

**Dùthchas** – a Gaelic word indicating something that is inherent, inseparable from oneself – is a project aiming to find practical solutions for developing rural areas and their surroundings in a sustainable way. It involves the participation of local people and public authorities, and is co-funded by the EU LIFE Environment Programme, and a Partnership of Scottish Public Agencies.

Three Pilot Areas in Scotland have been selected for the project:

- **North Sutherland**
- **Trotternish in Skye**
- **North Uist and Berneray in the Western Isles**

As a first step of the Dùthchas Project, each of the Pilot Areas completed an Initial Review, whereby local knowledge, impressions and concerns on the cultural, economic and natural aspects of the area were obtained from members of the local community and participating Public Agencies.

### 1.2 The Context of the Profile

The subsequent key stage in the Dùthchas project process has been the generation of a sustainability profile for each of the three Pilot Areas. This stage drew on information generated during the Initial



Fig 1.1

Reviews (from both the community and the agencies) and combined this with relevant quantitative data (made available from the agencies) to build a picture of the current status of each area in relation to key sustainability criteria. Fig 1.1 illustrates where the profiles fit into the overall Dùthchas process.

The aim of the profiles is to bring together community and agency information to establish a baseline from which the progress of the area towards sustainable development can be tracked. It provides a crucial link between the Initial Review and the sustainability strategy development. A vital element of the profiles is the identification of priority issues for each area in relation to sustainability.

### 1.3 DEFINING SUSTAINABLE DEVELOPMENT

A working definition for sustainable development has been established by the Dùthchas Project Team specifically for use in the project at the local level. Although taking into consideration existing national and international definitions it reflects more the local situation of the Pilot Areas.

- *The definition is made up of four key goals:*

**Goal 1** : Making the most of natural and cultural resources without damaging them

**Goal 2** : Retaining a viable and empowered community

**Goal 3** : Reducing problems of remoteness by delivering local needs locally and reducing dependence on external inputs

**Goal 4** : Avoiding harmful effects on other people, places and future generations



Fig 1.2



The four goals and their interrelationship are shown in Fig 1.2.

The figure illustrates how the Dùthchas definition with its four goals corresponds well to the traditional definitions of sustainable development. The first three goals equate well with the traditional environmental, social and economic aspects of sustainability. Goal 4 demonstrates how sustainability at the local level fits into the overall global picture.

**Box 1** : This box brings together a number of statements which appeared in the Dùthchas Newsletter where people from all three Pilot Areas, actively involved with Dùthchas gave personal impressions on the theme of sustainability.

#### DEFINING SUSTAINABILITY



#### 1.4 HOW DO WE MEASURE PROGRESS?

In order to determine what trends are occurring over time with respect to the status of sustainability in the Pilot Areas, it is necessary to establish what the present situation looks like or in other words the “baseline situation”. If we are to make the right decisions about what are the best actions to take in order to improve the sustainability of our areas (improve on this baseline) we need reliable information about the state of our communities, our environment, and our economy and the factors which impact on them.

This requires a set of “indicators” or measures, which in practical terms are facts and figures which help to explain the current state of things and how this might change over time. It is important to establish indicators that provide us with ways of measuring both the current state of our communities, environment and economy (so-called “status” indicators) and also ways of measuring our achievements in moving towards our sustainability goals (so-called “performance” indicators).



## 1.5 HOW THE PROFILES ARE STRUCTURED

In the current Sustainability Profiles we have established a framework, as far as we could, that links a number of indicators to a set of broad objectives that will take each of the areas towards delivering the Four Dùthchas Sustainability Goals. The profiles include a main chapter for each goal and within each are laid out the corresponding supporting objectives together with their respective indicators. This framework together with the results of the Initial Review allows us to build a picture of each area which can act as a baseline for future progress.

Fig 1.3 illustrates the Dùthchas Process and the relationship between the sustainability goals and supporting objectives and the role of indicators in the overall process. It also makes it clear what it is that we are expecting to achieve at each stage in the process.

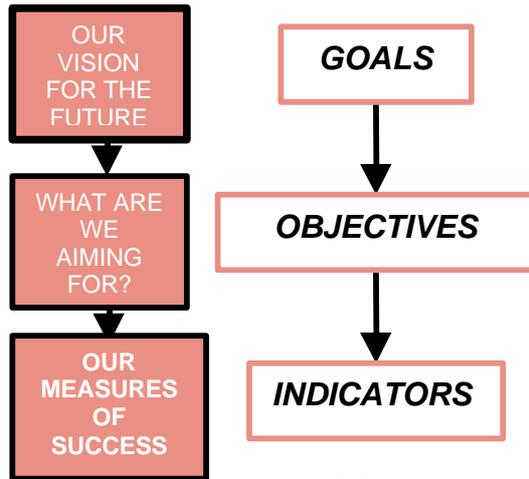


Fig 1.3

indicators which could better describe the status and progress of the areas towards their sustainability goals, but for which there was little if any existing information. Some of these are included as “additional recommended indicators” at the end of each section dealing with an objective, others are presented and discussed in *Annex 6*.

### USING THE PROFILES IN THE FUTURE

These profiles are a first attempt at describing the three Pilot Areas within a framework that will help each area move towards delivering the Four Dùthchas Sustainability Goals. They are based on indicators for which the information was already reasonably accessible.

Whilst researching the information and also during discussions and consultations with the key agencies, it became clear that there may be other more useful

In order to make the profiles, and in particular the performance measurement element more meaningful to each area it would seem appropriate for the Project Area Advisory Groups to shape the profiles further. This could be done by selecting some of the more meaningful indicators, for which there are little or no current data, and undertaking to make the necessary measurements in order to provide the missing information. Profiles could then be monitored and updated annually and thus used as a useful tool for tracking progress.



## Goal 1 Making the most of natural and cultural resources without damaging them



### Objective 1 Protecting and enhancing natural resources and promoting their value

**Key Topics :** sea; fresh water; land; air; biodiversity; habitat; landscape; management; stewardship; use; interpretation.

**Introduction** The indicators selected aim to provide a picture of the type, significance and quality of the natural resources present, and what is currently happening to protect and enhance these resources. Some of the status indicators identified (eg, air quality) are already at their 'highest' level. If monitoring over time were to show a degrading of their status, this would indicate environmental pressures arising in the Pilot Area.

## Status indicators

### Coastal Water Quality

The coastal waters of the Highlands and Islands are characterised by generally very high quality, resulting from limited pollution sources. The Scottish Environmental Protection Agency (SEPA) therefore does not conduct analytical sampling along the coast. Water quality is generally assessed by visual reviews, and considered high unless otherwise signalled. By monitoring any incidents of lowered coastal water quality, it is possible to determine where pressures or pollution increases are occurring within the Pilot Area. No recent incidents have been reported for the North Sutherland coastline

### River Water Quality

SEPA operates a classification scheme for river water quality with five levels:

Class A1: Excellent

Class A2: Good

Class B: Fair

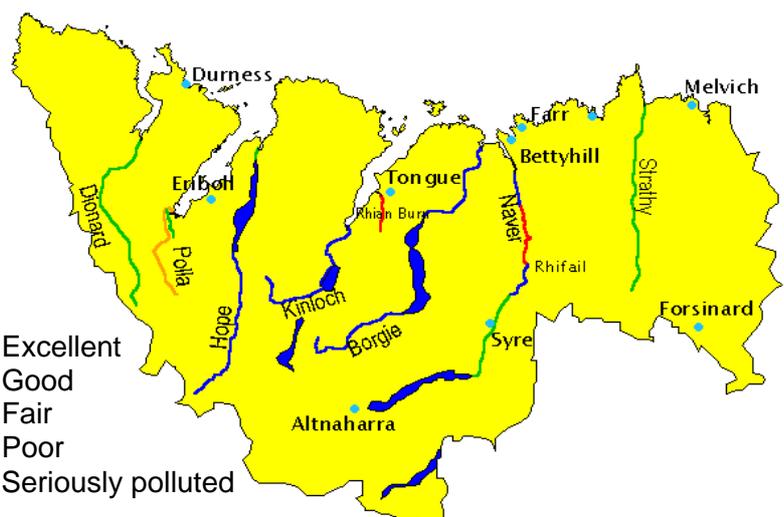
Class C: Poor

Class D: Seriously polluted

The class of a river, or segment thereof, is determined by measuring the level of certain parameters (eg dissolved oxygen, nutrient concentrations) in water samples. Most of the rivers sampled in the Highlands and Islands fall under Class A1 or A2. This is an indication of the pristine nature of the area, and the relatively small number of pollutant sources.

#### Key

- Excellent
- Good
- Fair
- Poor
- Seriously polluted





## Objective 1 Continued

### *% of nationally important habitat types*

The high environmental quality of North Sutherland is partly represented by the unique nature of some of its habitats, such as the peatlands or blanket bog. Land designated for its conservation value is a more general indicator of habitat value. By monitoring the percentage change of land cover occupied by nationally important habitats and by designations, the environmental pressures or improvements in the area can be gauged. In the North Sutherland Pilot Area, peatland accounts for 36% of the land area, and much of this is designated as SSSI. A total of 50 Sites of Special Scientific Interest are found in the Pilot Area, covering 47% of the land.

#### Percentage coverage:

<i>Designation</i>	<i>Sutherland Pilot Area</i>
<b>NSA</b>	12
<b>SSSIs</b>	47
<b>NSA/SSSIs</b>	52



### *Air quality*

The quality of air that we breathe has clear implications for personal health and the quality of our surrounding environment. Local air quality is affected by emissions from road transport, industrial activity, airports, power stations and natural sources. There are few pollution sources which can cause a lowering of air quality standards in the Highlands and Islands as a whole, let alone the North Sutherland Pilot Area. For this reason, limited air quality sampling occurs. The nearest air quality monitoring station to the North Sutherland Pilot Area is Strath Vaich, run under the DETR National Air Quality Monitoring Programme. Data is collected daily from the station on ozone, sulphur dioxide, and nitrogen oxides. The data collected to date indicate that the air quality of the Highlands and Islands area is high. The lack of pollution sources combined with the strong winds ensure that air quality is maintained. Monitoring of air quality in the Pilot Areas may be appropriate if known polluting sources were to become established.

## Measures of performance

**Interpretative centres** represent a structured, managed way of promoting and “making the most” of resources, encouraging learning and appreciation on the parts of visitors, whilst protecting the resources. The quality of the interpretative facilities, the number of visitors and repeat visitors, and the information provided can be good indicators of reasoned use of resources. Intensive use of an interpretative centre can potentially result in stress of the associated resources. A review of levels of perceived stress can therefore also be an important measure. To date information has not been collected in a sufficiently systematic way to permit a measured view of the quality and usage of interpretation centres in North Sutherland. Information is only available on certain individual centres, and this is reviewed in Appendix 1



## Objective 1 Continued

**Habitat management plans**, sponsored by Government and other bodies, are in place to encourage the protection of significant natural resources. By assessing the popularity of these schemes within North Sutherland, and the area of land affected, it is possible to gain a measure of how well the natural resource is being protected and enhanced. Habitat management initiatives in North Sutherland are represented chiefly by habitat restoration projects. Peatland restoration work has been completed in 8 different sites (see Appendix 1).

### Additional recommended Indicators

- *The area of native woodland cover*

Monitoring the change in areas of native woodland cover and assessing their condition and management provides a good indicator of the value attached to this important natural resource. Data on native woodland cover in North Sutherland is being sought from two main sources: The Caledonia Partnership database, which can provide information on the percentage of “semi-natural” woodland; and the MacCaulay Land Use Research Institute Land Cover data base from 1988, held by the Highland Council.

- *Biodiversity Action Plans*

are being developed with funding from Government sources in the light of the recent EU Habitats Directive, which encourages Member States to increase and diversify the number of species present in certain ecologically significant areas of the country. At this time, no Biodiversity Action Plans have been proposed or are being run in any of the three Pilot Areas. However, the potential establishment of such Plans in the future would be a clear indication of a ‘drive’ by the Pilot Area to increase its environmental value.

- *The numbers and species of breeding birds*

within the Pilot Areas are an example of the range of biodiversity supported by the local environment. The North Sutherland area supports important breeding populations of: red-throated diver, black-throated diver, hen harrier, golden eagle, merlin, peregrine, corncrake, golden plover and short-eared owl. Data on breeding success for those species within the Pilot Area is expected to be available from the Royal Society for the Protection of Birds in the near future.





## Objective 2: Protecting and enhancing cultural resources and promoting their value

**Key Topics:** cultural activities: language, arts, traditions, way of life; sites and monuments: management, use, interpretation.

**Introduction** The indicators selected provide information on the range of cultural and historic resources present in the Pilot Areas, and the activities underway to encourage their appreciation

### Status indicators

#### *Number of recorded vs. number of scheduled ancient monuments*

Recorded and Scheduled Ancient Monuments are indicators of the cultural and historical heritage of an area. Whereas recorded monuments represent any archaeological or cultural remains that have been located, Scheduled Ancient Monuments fall under specific legislative prescriptive guidelines, which renders them relevant at a National level.

The number of recorded and scheduled ancient monuments changes constantly, as new excavations occur, and as previously identified recorded monuments are judged significant enough to fall within the 'Scheduled' category. By keeping track of the ratio of the numbers of the two categories of monuments, a measure of the cultural significance of the area is maintained. Currently in North Sutherland, there are 2,059 recorded sites and monuments; of these, 64 are Listed Buildings and 106 are Scheduled Ancient Monuments.



#### *Number of Gaelic speakers as percentage of population.*

The Gaelic language and tradition is a key part of the culture within North Sutherland. Assessing the percentage of Gaelic speakers is one way of measuring its current status.

Little information is however available on numbers of Gaelic speakers specifically in North Sutherland. In Sutherland as a whole, however, 7.64% of the population speak, read or write Gaelic



### Measures of performance

The number of **events and ceremonies** celebrated by the local community can offer an indication of its cultural vitality. In North Sutherland, the events range from one-day celebrations to week-long festivals, focusing on cultural aspects of the community (other than the Gaelic language; see below). Although it is difficult to obtain a meaningful measure of this activity that combines both quantity and quality of the events, the available information (see Appendix 1) does indicate activities taking place in many parts of the Pilot Area.

As with 'events and ceremonies' above, the number and character of Gaelic related initiatives is an expression of the cultural activity of the area, but clearly focused more on the unique language aspect. Again, although it is difficult to obtain a meaningful measure of this activity that combines both quantity and quality of the events, the available information (see Appendix 1) does indicate activities taking place in many parts of the Pilot Area.



## Objective 2 continued



**Heritage trails and interpretation centres** represent a structured, managed way of promoting and “making the most” of cultural resources, encouraging learning and appreciation on the part of visitors, whilst protecting the resources. The quality of the interpretive facilities, the number of visitors and repeat visitors, and

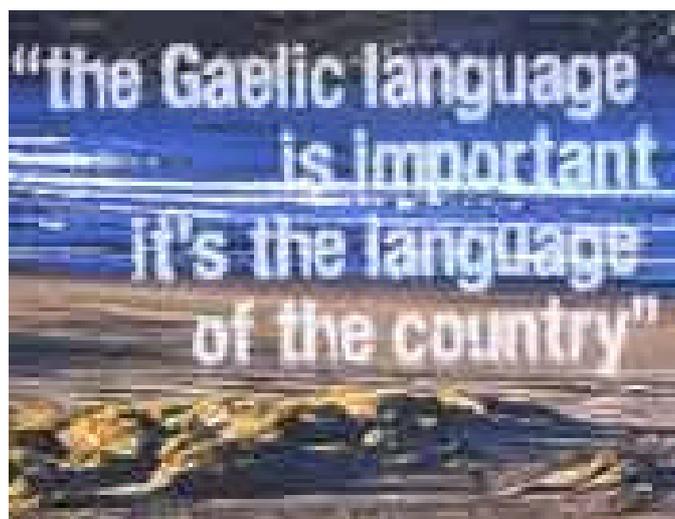
the information provided can be good indicators of reasoned use of resources. To date, information has not been collected in a sufficiently systematic way to permit a measured view of the quality and usage of cultural interpretation centres in North Sutherland. The available information does indicate the existence of a number of trails and small centres (see Appendix 1). Most notable are the RSPB reserve at Forsinard and associated walks; the Strathnaver Museum; and the Durness Toursit Information Centre.



## Additional recommended indicators

- *Number of interpreted sites and number not yet interpreted*

The number of interpreted sites is a measure of the degree to which cultural resources are promoted. Interpretation can range from the location of a descriptive plaque, to the establishment of a visitor car park, to the development of an interpretive centre and museum. There are many sites in North Sutherland and available information indicates that a number of these have been interpreted to varying degrees including guided walks in the Durness Ranger series and within the RSPB Forsinard Reserve, four interpretation centres, 13 interpretation panels and two area/topic based leaflets.





## Objective 3: Promoting sustainable and innovative use of natural resources

**Key topics:** agriculture; fisheries and forestry; game; minerals; energy; tourism; management; use; production; labelling; marketing; support; access to land and natural resources.

**Introduction** The indicators related to this objective aim to define the current level of availability of commercial natural resources, and the initiatives in place to develop new uses whilst ensuring that overall use is sustainable.

### Status indicators

#### *Proportion of land under forestry management.*

Forestry accounts for 2% of the land cover within the North Sutherland Pilot Area. This low percentage may represent an indication of the unsuitability for forestry activities, linked to the high proportion of peatland habitat in the area. The Highland Council forestry land capability survey is being reviewed for a more accurate assessment.

#### *Number of Grant Aided Woodland Schemes.*

A rough estimate obtained from review of the North Sutherland Forestry Commission maps suggests that forty-four wooded areas within the Pilot Area are covered by Grant Aided Woodland Schemes. These cover an area of approximately 70 km<sup>2</sup>.

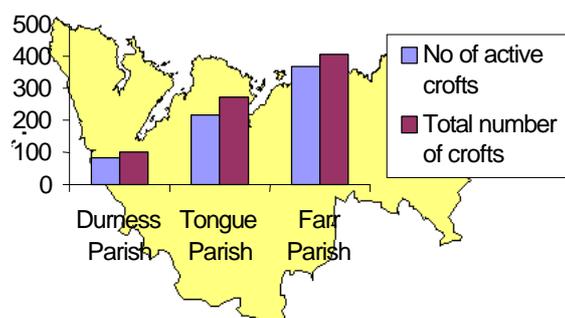
#### *Minerals*

The Highlands area is a major source of aggregates -- in the form of crushed rock, sand and gravel -- for Britain and Europe. Although no information is available for the North Sutherland Pilot Area, Sutherland as a whole has over sixty years' supply of sand and gravel, and close to forty years' supply of crushed rock for quarrying. The plan for a large coastal quarry at Durness/Eriboll was discarded in 1993-94 on economic, environmental and socio-economic grounds.

#### *Proportion of actively managed crofts vs number of absentee crofters.*

Crofting provides social benefits to rural areas by creating working communities, offering security of tenancy, and acting as a means for people to remain on the land. Traditional crofting techniques (eg the use of seaweed as fertiliser) also represent a sustainable use of natural resources. The proportion of active vs inactive crofts can indicate the potential for further growth of crofting communities within an area. The following crofting data is available for North Sutherland:

#### **Number of active crofts**



#### *Fisheries*

North Sutherland's coastal nature allows fishing harbours and fishing/aquaculture to play a role in the land economy. To date, however, a suitable indicator of fisheries resources (for which data is available) has not been identified.

#### *Game*

Recreational and commercial activities linked to game depend on resource numbers. Red Deer figures are maintained for North Sutherland (see Appendix 1), but data for other types of game, eg grouse or pheasant, are held by private estates and are not publicly available.



## Objective 3 Continued

### Measures of Performance

**Start-up of “green” projects** can be used as a measure of the extent to which natural resources are being used in an innovative way, often through the support of local grants. The available data shows that in the last two years, twenty-four grants have been made available by CASE for a mixture of “Environmental Renewal” projects and new “green” business start-ups (for details, see Appendix 1).

### Additional recommended indicators

- **Number of organic producers**

‘Organic’ agricultural produce – ie, grown according to strict guidelines set by the Soil Association, without synthetic fertilisers or chemical pesticides –has been shown to be a niche product which can be sold at a premium compared to normal produce. The degree to which Pilot Area producers are taking advantage of this market can be monitored over time.

To date, no information is available on this issue in North Sutherland. Some original research may be required to establish a complete record of organic producers in the Pilot Area. The Scottish Organic Producers Association may be starting to develop a full database.

- **No. of woodlands under the UK Woodland Assurance Scheme**

Woodlands under the UK Woodland Assurance Scheme sets out standard requirements for sustainably managed forestry areas. To date, no information on the above indicator for the North Sutherland area could be obtained from the Forestry Commission, but further requests may result in successful data release.



- **Stocking densities**

The density of cattle or sheep on grazing areas will play a significant role on the status of the land on which they feed. A balance needs to be struck between the carrying capacity of the land and the economic needs of the resident crofters. Monitoring of stocking densities will help determine which way the balance is swinging. To date, no indicator of stocking density has been maintained by official bodies



- **Index of grazing pressure**

Similar to stocking density above, an indicator of grazing pressure can help determine whether an area has reached or surpassed its ‘carrying capacity’, hence help shape agricultural management activities. Contributions to this grazing pressure can come from diverse sources including deer and sheep. There are many inter-relating factors contributing to grazing pressure and a single satisfactory index has yet to be developed.



## Objective 4: Promoting sustainable and wise use of cultural resources

**Key topics:** cultural tourism; activities; facilities; projects; products; use; productivity; events; groups; marketing; support.

**Introduction** Similar to Objective 3, this objective looks at how, and to what degree, cultural resources in the Pilot Areas are being sustainably managed and used. Because of the dynamic nature of this objective, status indicators also reflect performance, and the two categories are therefore grouped together.

### Status/performance indicators

#### *Availability of venues*

where cultural activities can occur is an indicator of the potential for cultural events. In general, all Village Halls and some schools within the North Sutherland Pilot Area get involved in promoting cultural resources to varying degrees (see Appendix 1 for more details)

#### *Use of centres and facilities*

Intensive use of an interpretive centre can potentially result in stress of the associated resources. A review of levels of perceived stress can therefore be an important measure.

To date, information has not been collected in a sufficiently systematic way to permit a measured view of the quality and usage of cultural/ heritage interpretation centres in North Sutherland.

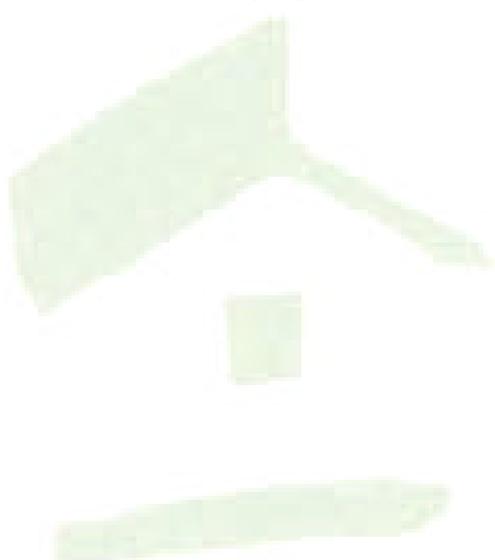
### Additional recommended indicators

- *Proportion of historic sites/monuments actively managed*

This reflects the degree of activity in the Pilot Area linked to publicising and exploiting the cultural and archaeological heritage.

- *Adaptive re-use of historic buildings*

This indicator would serve to demonstrate that historic sites or buildings do not necessarily need to be museums, and highlight other successful uses of culturally significant buildings.





## Goal 2 Retaining a viable and empowered community



### Objective 5: Retaining a balanced and healthy population

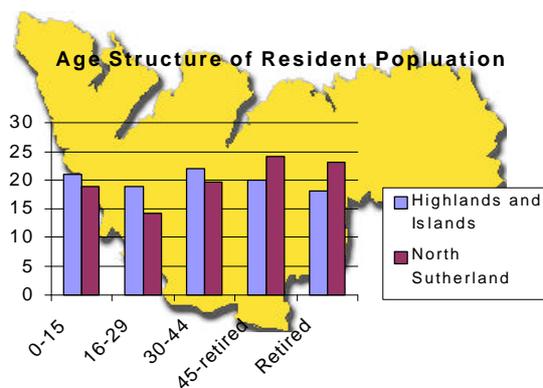
**Key topics:** population: total/dispersal; age structure; gender balance; health; population change and support measures; health change and support measures.

**Introduction** The health and balance of a population is of paramount importance to the economic well being of an area, overall quality of life and to individual fulfilment. The indicators chosen aim to provide a current picture of each area.

### Status indicators

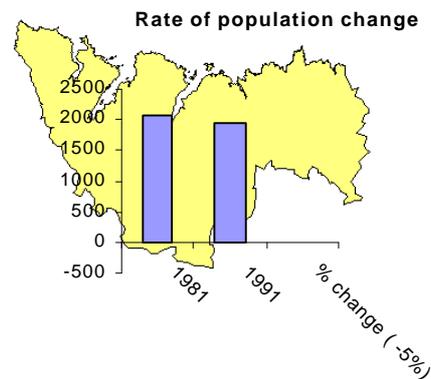
#### Age structure of resident population

The age structure can indicate obvious gaps in the numbers of any one age group. Approximates for North Sutherland, from the 1991 census, are shown in the graph below, and compared to Highlands and Islands population. The largest gap is indicated in the 16-29 age group.



#### % change in populations (trends, 1981-91)

By monitoring percentage change in numbers, a community can assess the situation and where appropriate consider ways of reversing unwanted trends. During the last 5 years, the population of North Sutherland has decreased by about 5%.



#### Gender balance in resident population

For growth and viability, a resident population needs to maintain a relatively even gender balance, and a sufficient proportion of women of child-bearing age. The data for North Sutherland for 1981 and 1991 shows the balance to be evenly placed between the percentage of female/male. In 1991, women of child-bearing age (taken, generally, to be between 16-44) constituted a healthy 33% of the total female population. This percentage closely matched that of the male population in the same age range (34%).

Year	F No's	F %	M No's	M %
1981	1187	51.5	1116	48.5
1991	1000	51.0	960	49.0



## Objective 5 continued

### *% of working age population*

This provides information on the earning potential of a population and hence its economic viability. Data for North Sutherland from the 1991 census is compared below to data for the Highlands and Scotland as a whole. The data indicates that North Sutherland has a lower percentage of working age population than either Highland in general or the whole of Scotland.

	North Sutherland	Highland	Scotland
Number of working age population	877	99,993	2,348,795
% of total population	55	62.4	76.3

## Measures of Performance

The new entrants scheme for crofters provides 'start-up' financial support to encourage the taking up of absentee crofts in the local area. This indicator can serve as a measure of the return of people to the local area, as well as the attraction of young people to crofting .

For North Sutherland, 26 new entrants under the **Crofts Entrants Scheme** were recorded in 1999. It is however unclear whether these were young crofters.



## Additional recommended indicators

- **Health Indicator**

An indicator providing a measure of the health of Pilot Area populations is being sought, but to date none has been agreed on which would be meaningful given the small size of the population considered, and the confidential nature of much health information.

- **Number of initiatives to encourage "young returners"**

The drain of young people from the Pilot Areas is one of the main concerns voiced by residents. By monitoring the opportunities and initiatives to encourage the return of young people, the effort being made to reverse the trend can be assessed. Original research and community-based research may be required for this indicator.



## Objective 6: Supporting community empowerment

**Key topics:** community-decision making; control of land and natural resources; access to funds; access to information; skills and expertise; community activity; functioning of democratic structures; local groups/activities; changes in land tenure; funding mechanisms; community spirit; information provision; primary, secondary, tertiary education provision/uptake.

**Introduction** The involvement of local communities in decision making and the improvement of local democracy and individual citizen involvement in the local political process, are key features of sustainable development. The indicators linked to this objective reflect the initiatives or ongoing activities aimed at increasing communications and action within communities.

## Status indicators

### *Number of community organisations (societies, clubs, volunteer groups)*

This reflects the current activity level within the area, and the opportunities for residents to become involved.

No listing of community organisations is maintained for the North Sutherland area. From conversation with local Council members, it is understood that there are approximately 8-10 community/voluntary groups per sub-area within North Sutherland, for a total of approximately 40-50 organisations.



## Measures of Performance

**Community Action Grants** are funds made available by the Local Enterprise Companies to community groups, to improve facilities for local people. The degree of funding is indicative of the effort being put into improving the community infrastructure.

For the period September 1997- August 1999, a total of 11 Community Action Grants, amounting to nearly £9,500, were provided by CASE for the North Sutherland Area. This represents approximately £5.00 per head of population. By comparison, for the whole of the Highlands and Islands for 1998-99, average Enterprise contributions to Community Action Grants were approximately £1.40 per capita.

**The Crofting Township Development Grant Scheme**, run by the Crofters Commission, requires local crofters and townspeople to agree together on a funding request to improve the local township. The number of grants awarded is a clear representation of the degree of local interaction, especially between groups who may not otherwise have opportunities for discussion.

**For North Sutherland in 1999, five Crofting Township Development Scheme grants were awarded, as follows:**

**Total Grant Support- £311,552**

**Crofters Contribution Payment- £87,793**

**Crofters Township Development Scheme Incentive- £22,239**



## Objective 6 continued

### Additional recommended indicators

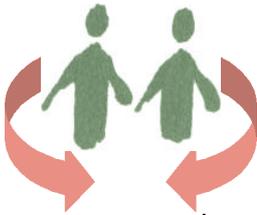
Other potential indicators of the degree of community empowerment, for which no information can be gathered at this time, are listed below. Their community-specific nature requires original research for quantification. Some information on community indicators is also provided in Objective 16.

- ***No. of communities taking part in community planning process***  
This shows the degree of local participation in the planning process
- ***No. of Grazing Committees meetings/ activities***  
Grazing Committees play a key role in the management and planning of crofting communities. The number of meetings and activities undertaken reflect the degree of activity within the community.
- ***Number of community initiated projects***  
Again, a reflection of the degree of motivation and activity within the community.

In addition, certain indicators linked to other objectives presented in this profile report are also partly related to community empowerment. They include:

- ***Access to information, skills and expertise***  
Objective 8 covers availability of essential services  
Objective 11 addresses the availability of Information Technology (IT) links in the Pilot Area.
- ***Education provision and take-up***  
Objectives 7, 8 discuss location of schools and fate of school leavers.





## Objective 7: Ensuring equal access to employment

**Key topics:** employment levels/age/gender; range of jobs; dispersal of jobs; access to employment; employment training; childcare provision; employment changes and support measures; skill base; Investors in People (IIP); business start-up.

**Introduction** Work is an enormously important aspect of the lives of individuals, and where this is lacking it can have clear and measurable effects on households and communities. The fate of employment is a fundamental requirement for a viable community. Employment structure is also important and reflects historical and present day trends. It will clearly be influenced by the environmental surroundings, in particular the natural resources and access to them. The availability and categories of employment, the ease of access to it, and the opportunities to prepare for it, are therefore important indicators to monitor.

### Status indicators

#### % unemployment

is an obvious indicator of economic viability of a community. Employment in the North Sutherland area shows some seasonal variations. Unemployment rates are slightly below those for Highland as a whole for both 1991 and 1997. The more recent data is shown here.

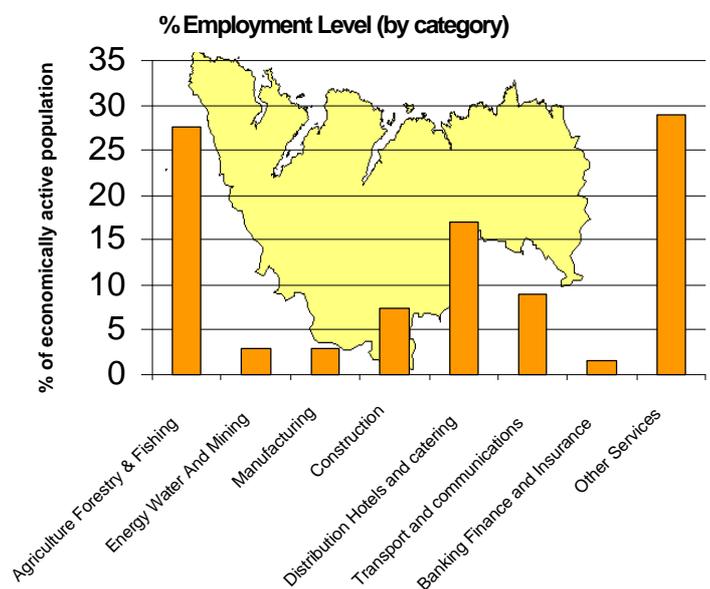
#### Percentage Unemployment 1997

	Q1	Q2	Q3	Q4
<b>North Sutherland</b>	8	7	5	6
<b>Highland</b>	10	8	7	7

#### % employment levels (by category)

The Dùthchas Pilot Areas are aiming to break free from a focus on seasonal, tourism-related employment, or a primarily agriculturally-based economy. Diversity of employment is an important indicator for the future since this can provide some resilience against recessionary pressures. By monitoring employment categories, and changes in numbers employed in each, the viability of the economic base of an area can be determined. The data indicates that employment in North Sutherland is currently concentrated in the Agriculture, Forestry and Fisheries sectors, the Distribution, Hotels and Catering sector, and Other Services Sector.

<b>Employment Category</b>	<b>% of Economically Active Population</b>
<b>Agriculture Forestry and Fishing</b>	27.5%
<b>Energy Water and Mining</b>	3%
<b>Manufacturing</b>	3%
<b>Construction</b>	7.5%
<b>Distribution, hotels and catering</b>	17%
<b>Transport and communications</b>	9%
<b>Banking, Finance and Insurance</b>	1.5%
<b>Other Services</b>	26%





## Objective 7 continued

### *% of pupils going on to something other than unemployment*

By monitoring the fate of local young people upon completion of their secondary studies, one can assess the availability and the take-up of opportunities in the local area. Detailed data on destination of school leavers for the whole of Caithness and Sutherland for the last three years is given below. Although the data is not specific to the North Sutherland Pilot Area, it provides trends for the region.

### Percentage of School Leavers in Caithness and Sutherland going on to different occupations

	1995/96	1996/97	1997/98
<b>Higher education</b>	26.7	27.6	29.8
<b>Further education</b>	20.2	20.2	16.6
<b>Training</b>	18.1	5.2	9.4
<b>Employed</b>	18.5	36.3	32.5
<b>Unemployed</b>	3.8	6.1	4.9
<b>Unknown/Others</b>	12.7	4.6	6.8
<b>Total Numbers</b>	525	504	513

## Measures of Performance

The Local Enterprise Companies are a source of funding for **new businesses**; the amount of funding for new business start-ups provided for the Pilot Areas serves to measure the entrepreneurial spirit of the area, and the development of new employment opportunities. For the period September 1997-August 1999, **four** new business start-ups were assisted by CASE in North Sutherland alone. This represents 0.002 new businesses per head of population. This compares well with the 191 Business Start-Ups supported by LECs within the area of the Highland Council in 1998-99, also representing 0.002 new businesses per head of population.

The **Investors in People (IIP)** National Standard is a practical way in which businesses can improve their performance, by training and developing their employees. A high number of IIP businesses represents a community where employees are provided with opportunities to improve their skills and abilities. For the period 1998-99, a total of 24 companies/organisations within Caithness and Sutherland achieved IIP recognition. None of these however falls within the Pilot Area. By comparison, for the whole of the Highland and Islands area, 235 companies/organisations achieved IIP recognition over the same time period.

## Additional recommended indicators

Additional indicators of the degree of access to employment, for which original research may be required to obtain viable data, include:

- ***Dispersal of employment opportunities***

A viable community will not concentrate its employment opportunities in one or two key locations, but will ensure that employment, within a variety of categories, is available throughout its area.

- ***Availability of child care***

Child care is an essential requirement to free parents in need of double income for economic viability. The availability of inexpensive, subsidised childcare is therefore an important measure.



## Objective 8: Ensuring equal access to essential services

**Key topics:** Housing; utilities (power, telecoms, sewerage etc;) services (Post Office, shops, doctors;) care provision (child, disabled, elderly); changes, initiatives and support for the above.

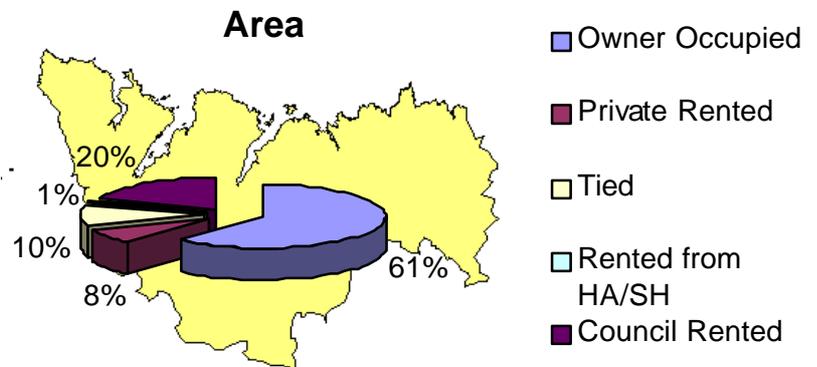
**Introduction** If access to essential services is limited in any way this tends to create “underprivileged” households or even whole areas. This is a barrier to a sustainable future, which aims to ensure that all members of society have access to those services and opportunities that can allow them to achieve their personal potential. The indicators selected below give an indication of the availability of services, and the ease of access to them.

### Status indicators

#### Rented versus owned homes.

The percentage of home ownership can indicate the degree of stability and security within an area, as well as some indication of the availability of affordable housing. The chart to the right shows house ownership information on North Sutherland obtained from 1991 census data.

#### Housing Tenure in Sutherland pilot



#### Number of essential services

Certain public services are viewed as ‘essential’ for a community, and can be used as a benchmark to determine its sustainability. Such services include: GP, post office, food shop, petrol station, recreational facilities, and primary and secondary schools.

Available information shows a reasonable spread of essential services in the communities across the north of the Pilot Area. In the southern half of North Sutherland, many of these essential services are very thinly spread or even missing in some cases (GP, post office and recreational facilities). This is to some degree related to the very low population densities in these areas.

#### Essential Services in North Sutherland





## Objective 8 continued



### *Bus frequency per sub-area in each Pilot Area*

Frequent, reliable public transport is a key requirement within the Pilot Areas, especially to facilitate access to essential services that may not be locally available. In general, in the North Sutherland Pilot Area, bus frequencies range between 1-2 buses per day to less than 1 bus per day in some areas.

## Measures of performance

- **Housing improvement grants**

are available from the local Council, and are most frequently linked to insulation. A measure of the degree of take-up of such grants will give some indication of the effort placed within the Pilot Areas for improving housing facilities. Currently, 25-30 households per year are receiving Housing Improvement Grants.

- **Integrated transport**

allows ease of connection between different services, eg distinct bus lines; ferries and buses; flights and buses. The degree of integration is a measure of the level and quality of public services available.

In North Sutherland, an integrated transport planning policy is not in action. However, under the Government's Rural Transport Initiative, Highland Council are currently considering and implementing solutions to enhance public transport services in the Highlands. In particular, these are aimed at:

- The need for more unconventional, personalised services such as door-to-door buses for the elderly, rather than an increase in frequency of existing lines.
- Better focusing of the times of the existing bus routes to reflect current need habits, eg evening bus services to allow access to local pool, evening classes and other social activities.



## Additional recommended indicators

Other essential services that can serve as indicators of sustainable communities include:

- **Sewerage provisions.** Many of the residents in more remote areas are provided with septic tanks. These may have limitations in certain situations, as external support is required for periodic emptying.
- **Power/Telecommunications.** Although very few if any residences in North Sutherland are not supplied with electricity and telephone lines, the reliability of these lines may suffer, especially in severe weather, and the distance of some locations from support centres may result in residents being disconnected for some time.
- **Radio/TV Reception.** Remote communities may not be able to obtain clear reception for telecommunication, due to distances from relay points. Radio and television may represent the only links to the 'outside world' in some locations.
- **Care Provision.** Distinct from GP facilities or availability of hospitals, this indicator reflects the availability of visiting nurses or caretakers, as well as the proximity of nursing homes or care centres. In an area with an increasing percentage of ageing population, such services may be considered essential.



## Goal 3 : Reducing problems of remoteness by delivering local needs locally and reducing dependence on external inputs



### Objective 9: Improving the local market for goods and services

**Key topics:** local goods; local services; local markets; local retail/wholesale outlets; local marketing schemes uptake, changes and supports.

**Introduction:** Some of the issues stemming from the remoteness of the Pilot Areas can in part be addressed by improving the local market for locally supplied goods and services. Greater local provision of local needs also meets other sustainability goals, by reducing transportation needs and improving local employment.

### Status Indicators

*Number of local producers supplying locally;*  
*Number of local markets/outlets*

A focus on selling locally rather than exporting can provide the local community with supplies, whilst decreasing transport costs for producers.

At this time, limited information has been obtained on local suppliers and markets for the North Sutherland area.

- A small shop similar to a co-op has apparently been set up as a community initiative to buy and sell local produce, arts and crafts etc.
- A handful of local hotels are known to be selling some local produce, in Melness, Strathy and Tongue.

*Number of local transport companies*



An example of how local transport needs may be serviced by local enterprise, thus providing local employment whilst serving local needs

The known local transport companies in North Sutherland area;

- a daily milk and message delivery run service in Borgie;
- 'Burrs of Tongue', a very old family business doing odd deliveries

### Measures of Performance

**New start-up businesses** servicing local needs provide a measure of the potential for local needs to be serviced locally, thus reducing transport and import. In the last two years there have been **four** successful new start-up businesses that focus on local needs.



## Objective 9 continued

### Additional Recommended Indicators

- **Percentage of workers whose place of work is within Pilot Area**

People working locally are maintaining and sharing skills and knowledge within their community, whilst satisfying local needs. This is an effective example of sustainable development.

- **Number of local direct marketing opportunities**

This is an indication of the potential for the growth and development of local businesses and services. For example, boxing schemes and other direct delivery schemes are local services that can stimulate local consumption of fresh produce, through direct supply by producers.



- **Number of boxing schemes**

Boxing schemes stimulate local consumption of fresh produce, through direct supply by producers, and are therefore an example of local needs being serviced locally.





## Objective 10: Promoting equal and effective access to goods, services and markets

**Key topics:** Transport infrastructure; public transport; car ownership; fuel prices/availability; integrated transport links; subsidised transport; changes/initiatives/supports for the above.

**Introduction:** Because travel is increasingly being taken for granted by individuals and businesses, society is becoming dependent on effective transport systems. This is even more pronounced in remote areas and communities. The degree of public transport availability and how well it is integrated indicates the ease with which goods and services can be accessed. The issue here, in contrast with Objective 8, is accessibility outside the Pilot Area. The challenge is to meet economic and social needs for access to facilities in ways that do not place unacceptable burdens on the environment.

### Status Indicators

#### Cost of fuel per journey distance to nearest larger town (Inverness)

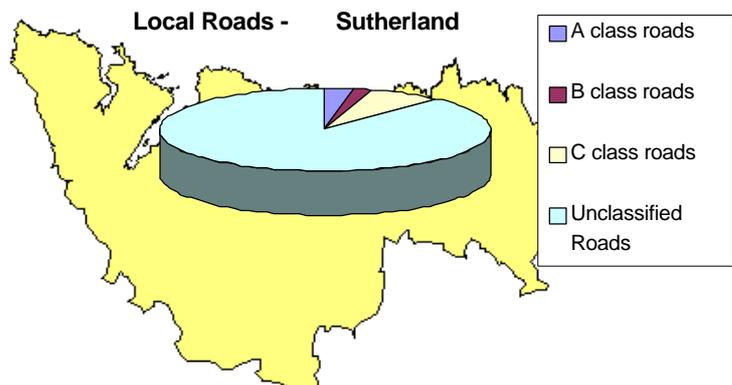
A rough estimate of the distance from both Melvich and Durness, two of the furthest points in the North Sutherland Pilot Area, to Inverness is approximately 190 km. The cost of such a journey is compared below to the cost of a trip to Edinburgh/Glasgow for an inhabitant of the Central Belt (who is likely to be always within about 40-50 km from either city).

The information shows that fuel prices are up to 15p a litre more in North Sutherland and that the costs to reach the nearest large town are up to six times more expensive.

	North Sutherland	Central Belt
Total driving distance to nearest large town (approx) <sup>1</sup>	190 km	40km
Average price of fuel	£4.00/gallon	73 p/l
Conversion assuming imperial gallons (4.55 l)	87.9 p/l	73 p/
Average value for vehicle efficiency <sup>3</sup>	30 miles/gallon	30 miles/gallon
Conversion assuming imperial gallons (4.55 l)	10.62 km/l	10.62 km/l
Required fuel for journey Melvich-Inverness return	35.8 l	7.5 l
Cost of fuel for return journey	£31.45	£5.50

#### State of local roads (Grades A, B, C, U)

This is a representation of ease and cost of access to greater markets. In North Sutherland, local roads are classified as shown in the chart to the right. Information on single vs double track roads in the area is not readily available.





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## Objective 10 continued

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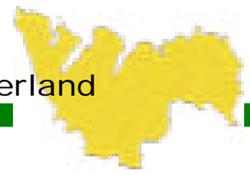
### Additional Recommended Indicators

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- **Available level of public transport out of the Pilot Area**
- **Degree of integration between public services**

The frequency of buses and trains to centres such as Aberdeen and Inverness provides a more sustainable form of access to greater markets and wider resources. The ease of transfer from one transport system to another, through designed connections, maximises the availability of transport to the community. Both of these pieces of information require some local research.
- **Car-Sharing Schemes**

Organised car sharing schemes can render transport available to people who may not own cars. Many such schemes may be informal and it may therefore be difficult to obtain information about them.




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## Objective 11: Providing an adequate Information Technology (IT) resource

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**Key topics:** IT infrastructure, access to IT; training for IT; levels of use; levels of skill; levels of awareness.

**Introduction:** The use of IT is rapidly becoming recognised as an effective way of accessing information and communicating from remote areas, and is regarded as a key means by which people and communities can fulfil their potential. IT

connection, availability and use can breach distance and allow access to information and markets. Availability of IT facilities to the local community, and courses to increase usage, are therefore key indicators.

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### Status Indicators

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#### *Number of IT centres*

At present there is one main IT Centre in North Sutherland. The *Naver Teleservice Centre* located in Bettyhill offers IT outreach courses provided by Thurso College, the local UHI representation, as well as secretarial and training services; e-mail and internet; and 'rent a desk' facilities. The teleservice centre is also an access point to the Highland Council.

Thurso College also provides outreach training provisions in three other locations in North Sutherland, namely Strathy, Farr Secondary School, and Forsinard. IT access to Thurso College from these locations is therefore also available.

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### Measures of performance

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**Provision of IT training courses available, and IT training requested** will both provide some indication of how well North Sutherland is developing and promoting its IT training resource. Courses offered through the Thurso College Outreach Project included Introduction of Computer Applications; approximately 15 students were enrolled. Business Planning, Business Numeracy, Computer Applications and Word Processing are planned for the year 2000.

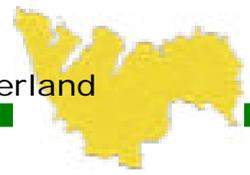
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### Additional Recommended indicators:

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- *Number of users of local IT centres*
- *Number of community web sites*
- *Number of business web sites*
- *Extent of ISDN access*

The first three indicators provide information on of the degree to which the Pilot Area is taking advantage of IT as a resource. The fourth reflects the ease of access to IT facilities in the area. Original research or IT searches may be the means to obtain this information.



## Objective 12: Reducing reliance on imports and subsidies



**Key topics:** imported goods; imported services; imported skills; levels of public subsidy; changes in levels of imports/use; uptake of subsidy; initiatives to reduce levels of imports.

**Introduction:** Heavy reliance on imported goods together with imported skills and services tends to reinforce the disadvantages of living in remote areas, and is usually reflected in the higher cost of living. This is further reflected in the levels of public subsidy. The goal of the indicators for this objective is to assess the current degree of reliance within the Pilot Area, and monitor changes and potential decreases over time.

Information on this topic is scarce, especially with regards levels of imported goods and skills. Original research is will be needed to generate essential data that is needed to carry out a full assessment of this topic.

## Status Indicators

The amount of **EU funding** provided to local areas comes in a variety of forms, including pan-Highland grants, and area-specific grants. LEADER grants and Objective 1 grants are specific categories of EU funding, administered by the Local Enterprise Companies, that play an important role in the local economy.

Two EU grants were recently provided to the Highland Council specifically for activities within the Sutherland area, and are currently ongoing:

- £94,000 towards the Melvich Industrial Estate (40% award towards total development costs;)
- £125,000 towards Strathy Village Hall Renewal Programme (50% of total project costs).

Numerous other pan-Highland projects funded by the EU may also affect the area.

**Local grants** for North Sutherland are also provided by organisations such as Scottish Natural Heritage, RSPB and the Local Enterprise Companies (see Objectives 1, 6). **Agricultural Grants** are provided by the Scottish Executive for Rural Affairs Department (SERAD). Data is aggregated at the Scotland-wide level, and is difficult to obtain for distinct areas such as the Pilot Areas under study.

## Measures of Performance

- **Level of skills import**
- **Level of goods import**

Although difficult to monitor, these indicators can provide a clear picture of the degree to which a Pilot Area is dependent on external inputs. The level of skills import is a reflection of the professional expertise that is required locally but cannot be obtained among the local work force. Similarly, the numbers and types of goods imported may indicate the limitations of local agriculture, climate, or manufacturing facilities.



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## Additional Recommended Indicators:

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- *Number of crofters taking up agricultural subsidies*

The main source of subsidy in the area is the Scottish Executive for Rural Affairs Department (SERAD), via agricultural grants. Information on grants given to individual crofters or in specific sub-areas of Scotland is considered confidential and is not available.





## Goal 4 Avoiding harmful effects on other people, places and future generations

### Objective 13: Supporting the wise use of energy



**Key topics:** renewable energy; energy efficiency: changes, initiatives, support for the above.

**Introduction:** Energy enables people to provide for their well-being, health and safety and is a key factor in the local economy. The production and use of energy has the potential to have a significant impact on the environment at both a global as well as local level. There is a need, therefore to focus on improvements in efficiency and conservation as a means of implementing our sustainability goals. Renewable energy sources (wind, sun, wave, biomass and water) offer additional opportunities if these are pursued where it is technically, economically and environmentally sensible to do so.

Although limited activities are currently occurring in renewable energy in the Duthchas Pilot Areas, by monitoring the suggested indicators over time, improvement trends can be established.

### Status Indicators

- Number of renewable energy projects**

There are currently no renewable energy projects in the North Sutherland Pilot Area. A study undertaken by Scottish Hydroelectric plc et al in December 1993 reviewed the potential renewable energy resource in Scotland. According to the study results, for the whole of Sutherland, the following *theoretical* renewable energy resource was identified:

Form of energy	Resource available at less than 10p/kWh (discounted at 8% over 20 years)
<b>Wind</b>	8424
<b>Hydro</b>	95
<b>Wave</b>	2

After taking account of planning, environmental and practical issues, the theoretical renewable energy resource in Sutherland is estimated at **between 600-1,000 MW** (resource at less than 10p/kWh, discounted at 8% over ten years).

It is obvious that wind power is the most promising and significant source of renewable energy to pursue in Sutherland.

The feasibility of connecting a renewable electricity source into the existing transmission and distribution system must be also be accounted for when considering a renewable project. In Sutherland, the transmission system is relatively sparse, with a double circuit 132 kV line running up the east coast, a single circuit 132 kV line down the side of Loch Shin, and a 275kV single circuit line from Beauly to Dounreay.



## Objective 13 continued

### Measures of Performance

Use of electricity from renewable resources indicates a sustainable approach to energy consumption. At this time it is impossible to disaggregate **the percentage of power from renewable resources** provided to the North Sutherland Pilot Area specifically. Data on fuel mix use during 1997/98 for Scottish Hydro-Electric (country-wide) is shown below.:

<i>Fuel Source 1997/98</i>	<i>Mix (%)</i>
<b>Gas</b>	53
<b>Nuclear</b>	20
<b>Renewables</b>	14
<b>Coal</b>	12
<b>Oil</b>	1
<b>Total</b>	100

Since Scottish Hydro-Electric is the principal supplier of electricity in Sutherland, it may be possible to extrapolate these values, very generally, to the Pilot Area.

The **level of investment in insulation** in private houses reflects the Housing Improvement Grants provided by the local Council and gives some indication of energy efficiency measures being taken by individual householders. The information was provided for North Sutherland in relation to Objective 8, as a reflection of housing condition. (See objective 8)





## Objective 14: Promoting waste minimisation and management

**Key topics:** waste management; waste minimisation; recycling; levels of activity; changes; initiatives; support for the above.

**Introduction** The traditional view of waste as being “refuse to dispose of” has been changed in enlightened sustainable communities. There is now an increased recognition that the disposal of waste can harm other people and places and create a liability for future generations. In addition, the actual commercial and economic value of recyclable waste is becoming recognised. The following approach, known as “the waste hierarchy”, is being introduced:

- *reducing the amount generated in the first place*
- *reusing waste items*
- *recovering and recycling waste*
- *disposal of residual wastes safely, preferably with energy recovery*

Recycling may not be a viable option in remote areas of the Highlands and Islands at this time, as the limited volumes collected may not be sufficient to justify travel and transport by recycling operators. Similarly, the siting of a dedicated recycling plant in the local area may not be economically viable if not enough waste is generated locally.

The indicators selected here reflect activities which may be ongoing to minimise or recycle waste, and to raise awareness levels in the local area. To date however, it is understood that relatively little is occurring with regards waste recycling or minimisation. Indicators are therefore recommended only at this time. The Highlands and Islands Waste Network, recently established to support local community initiatives, may provide feedback on future activity.

## Recommended Status Indicators

- *Quantity of waste by material type*
- *% of waste going to each of the waste hierarchy options (above)*
- *Distance travelled by waste*

## Measures of Performance

- **Number of waste minimisation schemes and successful waste minimisation initiatives**  
Such schemes are likely to be sponsored by the local Council or by volunteer bodies. Waste minimisation may be more appropriate than waste recycling as a goal for remote areas. At this time no waste minimisation schemes are in place in North Sutherland.
- **At this time no waste minimisation schemes are in place in North Sutherland.**
- **Number of recycling centres within and in proximity of the Pilot Area**  
Recycling centres are represented on the one hand by bottle banks and newspaper recycling points; and on the other by actual recycling plants which collect the waste and re-process it for re-use. Other recycling centres may include scrap metal yards and composting facilities.

With regards recycling points, these do not need to be present within the Pilot Areas, as long as they are within a reasonable distance, or at locations also offering other services. However, again, at this time, no recycling plants or recycling centres are thought to be present in North Sutherland. Informal composting schemes may be ongoing on individual crofts.





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## Objective 14 continued

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### Additional Recommended Indicator

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- *Ratio of quantity of material minimised to quantity of wastes disposed by waste type*

Although difficult to obtain, this information would provide a good indicator of the degree of awareness and waste minimisation activity occurring in the Pilot Areas.





## Objective 15: Supporting 'green' business and community initiatives

**Key topics:** green produce; green business; green labelling; product development; environmental management systems; awareness raising

**Introduction** Businesses are recognising that positive environmental resource management together with the support of ethical practices can bring substantial economic benefits. Such benefits are attractive irrespective of the size of business, although the process of achieving them can be complex and some smaller enterprises may require assistance. In recent years there has been a rapid increase in so-called "green" or "environmentally friendly" products which has become a significant growth industry. The involvement of business in the move towards a more sustainable future is absolutely crucial.

'Green' initiatives may still be relatively novel within the Pilot Areas, but their monitoring over time will be vital to determine the drive towards a more sustainable future.

## Status Indicators

- ***No. of green labelled products/services available***  
Green products/services may reflect recyclable content, organic origin, low energy consumption and other design parameters for preventing or minimising environmental impact or damage caused by the product/service. Available information on such products in North Sutherland –including organic produce --was presented in Objective 3 of this profile.

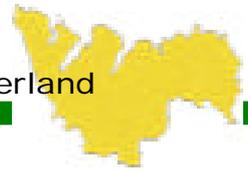
## Measures of Performance

- **Number of businesses meeting the Green Tourism Business Scheme requirements**  
The Green Business Tourism Scheme provides three levels of environmental achievement for tourist facilities, visitor centres and hotels. Businesses can aim for any of the three levels to improve their environmental standard and attract environmentally-conscious tourists.

At this time, in North Sutherland, only the Tongue Youth Hostel is a successful member of the scheme. The hostel has achieved the Green Tourism Business Silver Award.

- **Number of green initiatives sponsored by LECs**  
Environmental Renewal grants are provided by the LECs to fund projects which repair and renew the local physical environment. See earlier description under Objective 3 of such projects for North Sutherland.

Other categories of "green" grants, for example habitat management grants provided by SNH or RSPB, are described in Objective 1.



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## Objective 15 continued

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### Additional Recommended Indicators

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- ***Number of fair trade products available***

These are typically produce from developing countries which have been grown, processed and exported within an ethical economic framework.

- ***Number of 'green' initiatives***

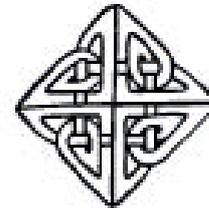
Any initiative reflecting environmental concern

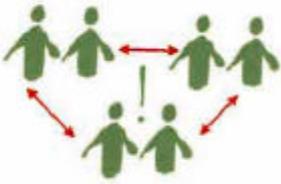
- ***Number of businesses meeting green/ethical standards***

Such standards include EMAS, the European Eco-Management and Audit Scheme; and International Standard ISO 14001 for Environmental Management Systems

- ***No. of woodlands achieving the UK Woodland Assurance Scheme***

The UK Woodland Assurance Scheme grants recognition to forest areas managed in an environmentally appropriate fashion.





## Objective 16: Promoting co-operation with other communities

**Key topics:** co-operative initiatives; inter-community links; rural-urban links; trans-national links; information exchange; national/international exchanges; awareness raising.

**Introduction** Around the world, communities are recognising that the process of becoming more sustainable can be accelerated through sharing ideas and experiences, and exchanging “know how”. Promoting co-operation also fosters stronger communities, by allowing groups to recognise ways for improving mutual benefits and reducing harmful effects on each other. Community co-operation increases the democratic base for fighting common issues, thus ensuring mutual empowerment.

The indicators proposed here aim to determine the degree to which communities within the Pilot Areas interact with each other, and with external bodies. Because of the double role of the indicators selected, they have been combined as both status and performance indicators.

To date, very limited data is available on these indicators. Original research and inter-community discussion would help in data collection.

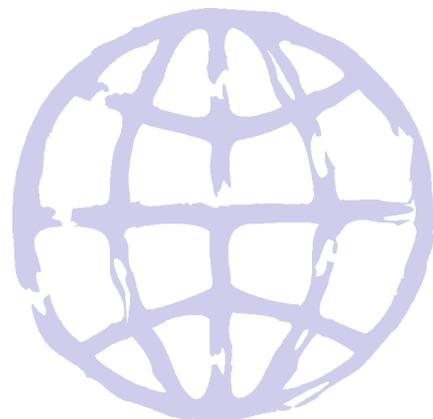
### Status/performance indicators

- *Number of inter-community meetings*
- *Number of inter-community initiatives*

Many local community councils and other community groups, both voluntary and more formal, participate in a periodic inter-community meetings to discuss issues which reach beyond local boundaries. Joint initiatives may result, depending on the issues at hand.

- *No. of study visits/conferences attended.*

These are opportunities for communities to learn and communicate beyond their local areas.



# **APPENDIX 1: SUSTAINABILITY DATA**

# Chapter 1

## Goal 1: Making the most of natural and cultural resources without damaging them

### *Objective 1: Protecting and enhancing natural resources and promoting their value*

**Key topics considered in this objective:** sea, fresh water, land, air, biodiversity, habitat, landscape, management, stewardship, use, interpretation.

The indicators selected aim to provide a picture of the type, significance and quality of the natural resources present, and what is currently happening to protect and enhance these resources.

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### Status indicators

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- *Coastal water quality*

The coastal waters of the Highlands and Islands are characterised by generally very high quality, resulting from limited pollution sources. The Scottish Environmental Protection Agency (SEPA) therefore does not conduct analytical sampling along the coast. Water quality is generally assessed by visual reviews, and considered high unless otherwise signalled.

By monitoring any incidents of lowered coastal water quality, it is possible to determine where pressures or pollution increases are occurring within the Pilot Area. No recent incidents have been reported for the North Sutherland coastline.

- *River water quality*

SEPA operates a classification scheme for river water quality with five levels:

- Class A1: Excellent
- Class A2: Good
- Class B: Fair
- Class C: Poor
- Class D: Seriously polluted

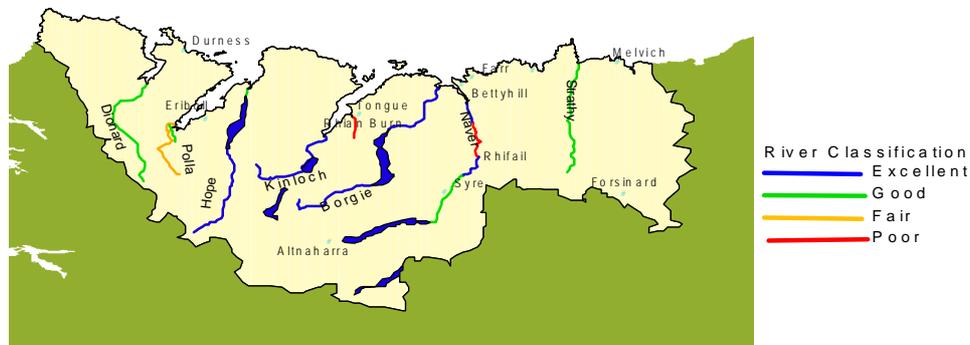
The class of a river, or segment thereof, is determined by measuring the level of certain parameters (eg dissolved oxygen, nutrient concentrations) in water samples. Most of the rivers sampled in the Highlands and Islands fall under Class A1 or A2. This is an indication of the pristine nature of the area, and the relatively small number of pollutant sources.

Eight rivers in North Sutherland are monitored for quality, at a total of 17 sampling locations. In 1998 (the date of the most recent available sampling results), the water quality in four of these rivers was shown to be within the highest classification (A1 and A2). Some sampling points along the other rivers show lower classification, as indicated below. This can be indicative of pressures and pollution incidents in the area.

RIVER NAME	SAMPLING LOCATION	OVERALL CLASS
River Dionard	A838 Bridge	A2
River Polla	Polla	B
River Polla	Un-named Trib.	A2
River Hope	Strathmore	A1
River Hope	Hope	A2
Kinloch River	Kinloch Lodge	A1
Rhian Burn	d/s Tongue	C
River Borgie	Borgie Forest	A1
River Borgie	Deepburn	A1
River Borgie	Crossburn	A1
River Naver	Mudale	A2
River Naver	Dalharold	A2
River Naver	Inlampie	A1
River Naver	Rhifail	C
River Naver	Skelpick	A1
River Strathy	Forest	A2
River Strathy	Strathy	B

Source: SEPA River Classification Scheme 1998, North Region, West Division, 27 September 1999

## River Classification, North Sutherland



- **% of nationally important habitats**

The high environmental quality of the Pilot Areas is partly represented by the unique nature of some of their habitats, for example in North Sutherland the peatland or blanket bog. A more general indicator of habitat value is represented by areas of land designated for their conservation value. By monitoring the percentage land cover occupied by unique habitats and by designations, and whether changes occur to these over time, the environmental pressures or improvements in the area can be gauged.

In the North Sutherland Pilot Area, peatland accounts for 36% of the land area, and much of this is designated as SSSI. With regards designations, a total of 50 Sites of Special Scientific Interest are found in the Pilot Area, covering 47% of the land. North Sutherland also contains one (and part of another) of Highland's 16 National Scenic Area, extending over 241 km<sup>2</sup>. combined with SSSIs and allowing for areas of overlap, the total area covered is 52%<sup>1</sup>. Loch Eriboll is a Marine Consultation Area; The Strathy Coast and Strathy Point are candidate Special Areas of Conservation, whilst the Red Point Coast is a Special Protection Area<sup>2</sup>.

**Percentage coverage<sup>1</sup>:**

Designation	Sutherland pilot area
NSA	12
SSSIs	47
NSA/SSSIs	52

Sources:<sup>1</sup> *Sutherland Pilot Area Profile, Highland Council Planning and Development Service (no date)*  
<sup>2</sup> *Scottish Natural Heritage map of designated areas, North Highland, 27 July 1999.*

- **Air quality**

There are few pollution sources which can cause a lowering of air quality standards in the Highlands and Islands. For this reason, limited air quality sampling occurs.

The nearest air quality monitoring station to the North Sutherland Pilot Area is Strath Vaich, run under the DETR National Air Quality Monitoring Programme. Data is collected daily from the station on ozone, sulphur dioxide, and nitrogen oxides.

Although geographically quite distant from North Sutherland (it is approximately 40 km north-west of Inverness) Strath Vaich can be considered representative of much of the pilot area. The station is on rural, remote moorland approximately 500 m from the nearest inhabited dwellings and approximately 150 m from the nearest road, used only for access. The surrounding area is open and remote. Air quality data from this station is therefore considered representative for the Pilot Area.

Raw air quality data is available for the station for every day over the last few years. The most recent aggregated data report is for 1996. Exceedence statistics for 1996 are presented below. The only pollutant of concern was shown to be ozone, and this only in terms of vegetation protection.

- All recorded nitrogen dioxide one-hour average concentrations for 1996 were below the 150 ppb 'low' standard set by the DETR. The nitrogen dioxide levels did not breach the EC Directive on air quality, and did not surpass the WHO guidelines.
- Similarly for sulphur dioxide, no exceedences of the DETR limits or the WHO guidelines were reported. All readings of 15-minute average concentrations of sulphur dioxide were below the 100ppb 'low' air pollution band set by the DETR.

- With regards ozone, the health protection concentration (8-hour average) of 55ppb set by the EC Directive was surpassed on 6 days in 1996. The vegetation protection concentration daily average of 32 ppb was surpassed on 213 days in 1996.

The data indicates that the air quality of the Highlands and Islands area is high. The lack of pollution sources combined with the strong winds ensure that air quality is maintained. Monitoring of air quality in the Pilot Areas may be appropriate if known polluting sources were to become established.

Source: AEAT National Air Quality Monitoring Programme website, [www.aeat.co.uk/netcen/report96](http://www.aeat.co.uk/netcen/report96)

## Measures of performance

- *Number, success and quality of interpretative facilities relating to conservation/environment;*
- *Quality of promotional material*
- *Trends in visitor numbers*

Interpretative centres represent a structured, managed way of promoting and “making the most” of natural resources, encouraging learning and appreciation on the parts of visitors, whilst protecting the resources. The quality of the interpretative facilities, the number of visitors and repeat visitors, and the information provided can be good indicators of reasoned use of resources.

Intensive use of an interpretative centre can potentially result in stress of the associated resources. A review of levels of perceived stress can therefore also be an important indicator. Although this is difficult to measure at this time, it may be appropriate at a later date.

The RSPB Forsinard Reserve is found within the North Sutherland pilot area. It occupies 8,398 ha and is characterised by pristine blanket bog and peatland. Deer management and trout fishing occurs, as well as partnership activities with local crofters. The “Flow Country Visitor Centre” is located in Forsinard railway station and open daily April to September.

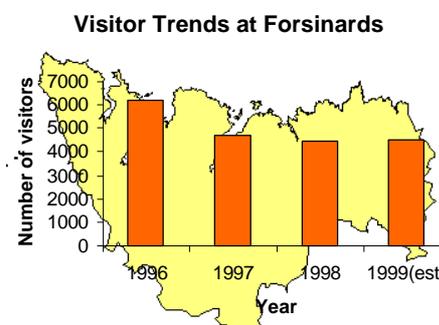
Since 1995, over 18,000 people have visited the reserve. Guided walks are undertaken every Tuesday and Thursday during the open season. A newsletter covering reserve activity is published by the RSPB.<sup>1</sup> The Dudh Lochan Trail on the Reserve was constructed by the RSPB in 1996; a self-guiding leaflet allows visitors to walk the trail at their own leisure. Since setting up the facilities in 1995, the number of visitors at Forsinard have been as follows:

42 to 78 guided walks and other events occur per year, involving between 529 and 1337 participants. School visits vary from 7 to 23 schools per annum, and involve from 200 to 720 school children p.a. A partnership with Scotrail involved cheap travel for schools visiting the Reserve.

Source: Fax from Norrie Russell, RSPB Forsinard, 20 September 1999.

Other environment-related interpretative centres or tourist attractions in North Sutherland include:

- Smoo Cave, Clo Mor Sea Cliffs, Faraidh Head, Loch Eriboll
- Invernaver Nature Reserve<sup>2</sup>



A Countryside Ranger (funded by SNH and Highland Council) is based in Durness. The ranger leads guided walks in the Durness area with a particular focus on wildlife.

A large number of leaflets/booklets cover the North Sutherland area:

- The Parish of Durness has recently published a leaflet to promote the Durness area.
- The Highlands of Scotland Tourist Board recently produced two leaflets (North West Sutherland & Caithness and North Coast Sutherland) to promote the area.
- The RSPB published a trail guide, A Visitor Guide to the Peatlands of Caithness and Sutherland 1998: The Peatlands Trail. The guide book is available from book shops and Tourist Information Centres.
- In 1991, the then Nature Conservancy Council for Scotland published a map entitled: Caithness and Sutherland – places to visit for Wildlife and Landscape.
- Forest Enterprise have produced a full-colour leaflet/map to promote the natural and cultural interests of the forests of the far north.
- The Highland Interpretive Strategy Project for the Tongue and Farr area identified a number of trails and walks in the area relevant to Dùthchas. A two volume report was produced in 1997.
- A Hill Walkers Guide to Sutherland, by Tom Strang and 'Walk Sutherland' are two books of footpaths in the area<sup>3</sup>.

Source: <sup>1</sup>RSPB Community Newsletter for Caithness and Sutherland, June 1999

<sup>2</sup> Letter from S Peterkin, Highlands Of Scotland Tourist Board, September 1999

<sup>3</sup> Letter from Pat Thompson (RSPB) and Jackie Fairweather (SNH), 20 September 1999

- **Land under habitat management**

A number of habitat management plans, sponsored by Government and other bodies, are in place to encourage the protection of significant natural resources. By assessing the popularity of these schemes within the Pilot Areas, and the area of land affected, one can obtain a measure of how well the natural resource is being protected and enhanced.

Habitat management initiatives in North Sutherland are represented chiefly by habitat restoration projects. Peatland restoration work was completed at 8 different areas in North Sutherland. The work was co-financed by a partnership of RSPB, SNH and CASE with matching funds from the EC LIFE Nature programme. The work was undertaken at the sites listed below:

1. Cross Lochs. Part of RSPB Forsinard Reserve and Forsinard Bogs Site of Special Scientific Interest. A total of 115 dams were installed along 1.8 km of hill drain. Detailed ecological monitoring carried out prior to the restoration work commencing.
2. Loch Slaim. Part of West Borgie Site of Special Scientific interest. A total of 62 dams were installed along 1.68 km of hill drain. Baseline monitoring carried out.
3. Mudale Catchment. Part of Druim nam Bad site of Special Scientific interest. A total of 109 dams were installed along 1.7 km of hill drain. Baseline monitoring carried out.
4. North Fideag. Part of RSPB Forsinard Reserve and adjacent to Sletill Peatlands SSSI. An area of peatland ploughed in preparation for tree planting was restored by returning the removed peat back into the furrows.
5. Inchkinloch. Immediately adjacent to Bad na Gallaig SSSI. Trees were removed from 9 ha of forested peatland in an effort to restore the area to active blanket bog. Complimentary hydrological work was carried out with the installation of 177 dams. Baseline monitoring carried out.
6. Talaheel. Part of RSPB Forsinard Reserve and adjacent to East Halladale SSSI, Sletill Peatlands SSSI and Loch Caluim Flows SSSI. Trees were removed from 143 ha of afforested peatland in an effort to restore the area to active blanket bog. Complimentary

hydrological work was carried out with the installation of 676 dams. Detailed ecological monitoring carried out prior to the restoration work being carried out.

7. South Fideag. Part of RSPB Forsinard Reserve and adjacent to Sletill Peatlands SSSI. Trees were removed from 16.8 ha of afforested peatland in an effort to restore the area to active blanket bog. No baseline monitoring carried out.
8. Gualin. Part of Gualin National Nature Reserve and Foinaven SSSI. A total of 42 dams were installed in three different areas to raise the water table over areas damaged by All Terrain Vehicles. Additional work (*Sphagnum* spp. translocation) was carried out to assist the rate of recovery. Baseline monitoring carried out.
9. Restoration of 2 bog pool systems covering 3.5 ha beside the Bhealaich Bridge and Dudh Lochain Trail. These pools had been completely drained and were reinstated by installing 6 dams.
10. The EC LIFE funded Peatlands Project also published best practice guidelines on peat cutting, grazing, burning and use of vehicles on the peatlands.
11. The inbye section of a farm owned by RSPB is leased to put back the integrated management of the hill land, to allow improved agricultural and conservation management.

Sources: communications from Pat Thompson (RSPB) and Jackie Fairweather (SNH), 20 September 1999; Fax from Norrie Russell, RSPB Forsinard Reserve, 20 September 1999

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## Additional recommended indicators

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- **% , condition and increase over time of native woodland cover**
- **Number, area and % of woodland coming into active management**  
The area of native woodland cover (versus imported fast-growing commercial conifer species) within a given Pilot Area is an indication of the presence and availability of a high quality, unique habitat. Monitoring the increase in such areas, and assessing their condition and their management, provides a good indicator of what is considered to be a significant natural resource. Data on native woodland cover in North Sutherland is being sought from The Caledonia Partnership database, which can provide information on the percentage of “semi-natural” woodland.
- **Implementation of local Biodiversity Action Plans**  
Biodiversity Action Plans are being developed with funding from Government sources in the light of the recent EU Habitat Directive, which encourages Member States to increase and diversify the number of species present in certain ecologically significant areas of the country. At this time, no Biodiversity Action Plans have been proposed or are being run in any of the three Pilot Areas. However, the potential establishment of such Plans in the future would be a clear indication of a ‘drive’ by the Pilot Area to increase its environmental value.
- **Trends in breeding bird populations**  
The numbers and species of breeding birds within the Pilot Areas are an example of the range of biodiversity supported by the local environment.

The North Sutherland area supports important breeding populations of: red-throated diver, black-throated diver, hen harrier, golden eagle, merlin, peregrine, corncrake, golden plover and short-eared owl. Data on the numbers of breeding within the pilot area is expected to be available from the Royal Society for the Protection of Birds.

Source: Letter from Pat Thompson (RSPB) and Jackie Fairweather (SNH) 20 September 1999

## **Objective 2: Protecting and enhancing cultural resources and promoting their value**

**Key topics considered in this objective:** cultural activities, language, arts, traditions, way of life, sites and monuments; management, use, interpretation.

The indicators selected provide an indication of the range of cultural and historic resources present in the Pilot Areas, and the activities underway to encourage their appreciation.

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### **Status indicators**

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- ***Number of recorded vs. number of scheduled ancient monuments***

Recorded and Scheduled Ancient Monuments are indicators of the cultural and historical heritage of an area. Whereas recorded monuments represent any archaeological or cultural remains that have been located, Scheduled Ancient Monuments fall under specific legislative prescriptive guidelines, which renders them relevant at a National level.

The number of recorded and scheduled ancient monuments changes constantly, as new excavations occur, and as previously identified recorded monuments are judged significant enough to fall within the 'Scheduled' category. By keeping track of the ratio of the numbers of the two categories of monuments, a measure of the cultural significance of the area is maintained.

The Archaeology Unit of the Highland Council has prepared a Sites and Monuments Record for the North Sutherland Area. According to this record, there are 2,059 recorded sites and monuments in the area; they include forts, chambered cairns, brochs, castles, hut circles and deserted townships. Of these, 64 are Listed Buildings, and 106 are Scheduled Ancient Monuments. Four sites are designated as both Listed and Scheduled Ancient Monuments. (Note however that the North Sutherland Area as defined by the Archaeology Unit is slightly wider than the Pilot Area for the Dùthchas project).

*Source: Archaeology Unit of the Highland Council, Recorded Archaeological Sites, North Sutherland Area, 21 September 1999*

- ***Number of Gaelic speakers as percentage of population***

The Gaelic language and tradition is a key part of the culture within the Pilot Areas. Assessing the percentage of Gaelic speakers is a means of monitoring its current status and significance.

However, little information is available about number of Gaelic speakers in North Sutherland. In the township of Melness, approximately 24-30 native speakers have been identified<sup>1</sup>. In Sutherland as a whole 7.64% of the population speak, read or write Gaelic<sup>2</sup>.

*Source:<sup>1</sup> conversation with Brian Mcleod, Melness Gaelic Centre, September 1999.<sup>2</sup> 1991 Census, provided by the Highland Council*

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### **Measures of performance**

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- ***Number of events and ceremonies celebrated by the local community***

The events range from one-day celebrations to week-long festivals, focusing on cultural aspects of the community (other than the Gaelic language). They offer an indication of the cultural vitality of a community. In North Sutherland, the following events were reported:

1. Initiative in Armadale- local studies group organises lectures, walks, places to visit, based on the history of the area<sup>1</sup>
2. Strathy local study group – lectures, interpretative walks etc<sup>1</sup>
3. Highland Archaeology Week- an annual event with some venues in the North Sutherland region: 1999 Strathy, Durness, Skerry<sup>2</sup>
4. Northlands Festival- opera, music and drama celebrating the North's links with Scandinavia. Various venues throughout Caithness and Sutherland, including Skerry Village Hall (September 16, 1999) <sup>3</sup>
5. Durness Highland Gathering- Highland dancing, junior and senior piping events, heavy events, field and track events, hill race, tug-o-war and novelty events (July 30, 1999) <sup>4</sup>

Sources: <sup>1</sup>Conversation with Mr Brian Mcleod, Melness Gaelic Centre

<sup>2</sup>Highland Council Archaeology Department

<sup>3</sup>The Macallan 'What's On' Autumn 1999, published by HI Arts

<sup>4</sup>The Macallan 'What's On' Summer 1999, published by HI Arts

- **Number and character of Gaelic related initiatives**

As with the 'events and ceremonies' indicator above, this is an expression of the cultural activity of the area, but focused more on the unique language aspect. The following initiatives have been reported for North Sutherland:

1. Tongue Primary School has a Gaelic Unit, with 9 children registered (primary age) <sup>1</sup>
2. Melness has a Gaelic House (Taigh Na Gaidhlig), which acts as a local resource centre, holds conversation groups on Wednesdays (approx. 6-8 participants)<sup>1</sup>
3. Initiative in Sgeireadh: 'Coman Eachdraidh Sgeireadh' to draw together an archive of local history<sup>1</sup>
4. Initiative to get classes underway for learners of language: Bettyhill Farr school on Monday 1 class, expect approx. 10 participants (starting Nov, 99); Tongue classes underway, approximately 12 students enrolled<sup>1</sup>
5. Bettyhill School looking to cater for secondary students (graduates of Tongue Primary School's Gaelic Unit) <sup>1</sup>
6. Gaelic Choir meets in Melvich <sup>1</sup>
7. Bettyhill has recently approved the establishment of joint parent/toddler Gaelic language classes <sup>1</sup>
8. Grey Coast Theatre Group (Thurso) interested in producing a play to celebrate the life and work of Rob Donn (Gaelic poet) <sup>1</sup>
9. Sradagan ('Sparks') – Gaelic youth group, based in Tongue Village Hall<sup>1</sup>
10. Am Parbh – Gaelic development group that covers the whole of the Dùthchas area<sup>2</sup>
11. Am Bratach- Magazine promoting Gaelic culture and events ( not confined to NW Sutherland area)
12. North West Council for Community Action, Strathnaver- Sponsors and promotes Gaelic culture
13. The Mod- (October). The biggest annual gathering of Gaelic speakers. Held in Fort William this year, where the North Sutherland Gaelic choir will be representing the area.

Sources: <sup>1</sup>conversation with Brian Mcleod, Melness Gaelic Centre. <sup>2</sup> Conversation with Mr Donald Mcleod, North West Sutherland Council for Community Action 11 November 1999

- **Number and description of heritage trails/interpretation centres**

This is another indication of the effort placed on maximising the value of cultural heritage, and ensuring its promulgation among the community and visitors.

Recognised tourist routes and trails through North Sutherland include:

- North West Highland National Tourist Route<sup>1</sup>
- Rossal Clearance Trail (recently upgraded by the Forest Enterprise)<sup>1</sup>
- Durness Ranger Walks<sup>2</sup>
- New Sustran Cycle Route will cross the area<sup>1</sup>
- Planning work has also begun on the construction of a cultural/heritage trail in Strathnaver<sup>1</sup>
- A heritage trail is also planned for Laide, overlooking Loch Eriboll<sup>1</sup>

Cultural tourist attractions include:

- Balnakeil Craft Village<sup>1</sup>
- Strathnaver Museum<sup>1</sup>
- The Printmakers Gallery, Durness<sup>1</sup>
- Strathnaver Museum in Bettyhill highlights history and tradition of the area.<sup>1</sup>
- Durness and Bettyhill Tourist Information Centres act like mini 'interpretative centres'.<sup>1</sup>

Interpretation Facilities:

- 13 interpretation panels<sup>2</sup>
- 2 area/topic based leaflets<sup>2</sup>

Source:<sup>1</sup> Letter from Sandra Peterkin, Highland of Scotland Tourist Board, September 1999.

<sup>2</sup>Letter from Rona Gibb, Highland Interpretive Strategy Project, November 1999

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## Additional recommended indicators

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- ***Number of interpreted sites and number not yet interpreted***

The number of interpretative sites is a measure of the degree to which cultural resources are promoted. Interpretation can range from the location of a descriptive plaque, to the establishment of a visitor car park, to the development of an interpretative centre and museum. There are many sites in North Sutherland and available information indicates that a number of these have been interpreted to varying degrees, including guided walks in the Durness Ranger series and within the RSPB Forsinard Reserve, four interpretation centres, thirteen interpretation panels and two area/topic based leaflets.

Source: letter from Rona Gibb, Highland Interpretive Strategy Project, November 1999

### ***Objective 3: Promoting sustainable and innovative use of natural resources***

**Key topics considered in this objective:** agriculture, fisheries and forestry, game, minerals, energy, tourism, management, use, production, labelling, marketing, support, access to land and natural resources.

The indicators related to this objective aim to define the current level of availability of commercial natural resources, and the initiatives in place to develop new uses whilst ensuring that overall use is sustainable.

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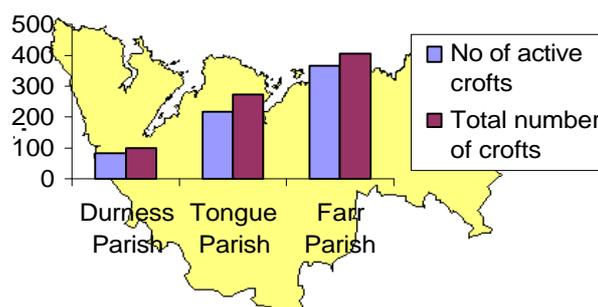
## Status indicators

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- **Proportion of actively managed crofts vs number of absentee crofters**

Crofting provides social benefits to rural areas by creating working communities, offering security of tenancy, and acting as a means for people to remain on the land. Traditional crofting techniques (eg, the use of seaweed as fertilizer) also represent a sustainable use of natural resources. The proportion of active vs inactive crofts can indicate the potential for further growth of crofting communities within an area. The following crofting data is available for North Sutherland:

### Number of active crofts



**Total: 667 crofts, 112 absentees**

Approximate extent of croft land for Durness Parish: 313.447 ha

Approximate extent of croft land for Tongue Parish: 569.944 ha

Approximate extent of croft land for Farr Parish: 5189.024 ha

**Total: 6072.415 ha**

Extent of grazing for Durness Parish: 2895 ha

Extent of grazing for Tongue Parish: 10,041 ha

Extent of grazing for Farr Parish: 31,329 ha

**Total: 16,255 ha**

*Source: letter from J Kerr, Crofters Commission, 15 September 1999. Fax from Dorothy Hamilton, Crofters Commission, 5 October 1999.*

- **Proportion of land under forestry management**

Forestry accounts for 2% of the land cover within the North Sutherland Pilot Area, providing an indication of the unsuitability for forestry activities.

The North West Sutherland Native Woodlands Project, sponsored by Caithness and Sutherland Enterprise (CASE), provided funding in 1997-98 for native woodland planting initiatives. In September 1997 the Project included initiatives such as a Crofter Forestry scheme, and a Native Woodland regeneration scheme.

Two sets of proposals for funding under the North West Sutherland Native Woodland Project were prepared in March 1998. One set was for one of the most northerly native woodlands on the Scottish mainland and included two enclosures of fragmented over-mature birch wood. Three potential new schemes have emerged from two new sites, one in Assynt and one in Strathnaver. One existing scheme, in Skerry, was fenced and planted. A seed bank was

distributed to six growers to produce trees of North West Sutherland origin. This reflects a growing confidence in the market for these trees.

*Source: Caithness and Sutherland Enterprise, Monthly Reports for September 1997 - March 1998.*

- **Number of grant aided woodland schemes**

A rough estimate obtained from review of the North Sutherland Forestry Commission maps suggests that forty-four wooded areas within the Pilot Area are covered by Grant Aided Woodland Schemes. These cover an area of approximately 70 km<sup>2</sup>.

*Source: Letter and maps from Bryce Reynard, Forestry Commission, 17 September 1999.*

- **Fisheries**

North Sutherland has an extensive coastline, and fishing harbours and fishing/aquaculture play a role in the land economy. To date, however, a suitable indicator of fisheries resources (for which data is available) has not been identified.

- **Mineral resources**

The Highlands area is a major source of aggregates – in the form of crushed rock, sand and gravel – for Britain and Europe. Consultants for the Regional Council in 1993-94 studied the potential for a large coastal quarry in the Durness/Eriboll area. The balance of arguments did not favour any superquarry development here, taking into account the likely quality and quantity of rock, environmental and socio-economic impacts, and prospects for alternative approaches to local rural development in the area:

Aggregate reserves and years' supply, by type and Area (1995)

Area	Sand and Gravel (000 tonnes)	Sand and Gravel (Years' supply)	Crushed Rock (000 tonnes)	Crushed Rock (Years' supply)
Sutherland	4,858	66	4,081	38

*Source: Highland Council Minerals Survey, 1995. Highland Trends 1997 report*

- **Game Resources**

Recreational and commercial activities linked to game depend on resource numbers. Red Deer figures are maintained for North Sutherland and given below, but data for other types of game, eg grouse or pheasant are held by private estates and are not publicly available.

North Sutherland 1997: number of red deer:

Male – 2253

Female – 4009

Calves – 1434

Naver – Halladale 1996: number of red deer:

Male – 588

Female – 797

Calves – 298

*Source: Fax from Alan Corrigan, Deer Commission for Scotland, November 1999.*

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## Measures of performance

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- *Start-up of “green” projects*

This can be used as a measure of the extent to which natural resources are being used in an innovative way, often through the support of local grants. Available “green” grants for habitat management are described under Objective 1. Additional grants may include:

- ‘Environmental Renewal’ grants provided by the Local Enterprise Companies (LECs); these are to cover the costs of removal of dereliction, the improvement of amenity, enhanced landscaping and associated environmental improvements.
- business start-up grants from the LECs for green projects.

The degree of uptake of such grants indicates the activity level with regards environmental issues already existing in the area

For the period September 1997-August 1999, the following Environmental Renewal Grants were provided by Caithness and Sutherland Enterprise (CASE) for individuals or organisations operating within the North Sutherland Pilot Area:

1. Melvich Community Council- Portskerra Harbour improvements £5,949
2. Forest Enterprise- Imaginative interpretation project at Rosal, Strathnaver, which will include improvements to the footpaths round the site and the installation of new information panels (some of which will have audio facilities) £5,000
3. Durness Community Council- Cattle grids and ring fencing in village £3,500
4. Highland Council, Inverness- Establish archaeological trail in Strathnaver £5,000
5. Caithness and Sutherland Footpath Project- Redefine footpath from Strathy Old School to PO £850
6. Caithness and Sutherland Footpath Project- Kissing gate on footpath to Melvich Beach £572
7. Caithness and Sutherland Footpath Project- 60 metres of new footpath at Portskerra £474
8. Strathy and Armadale Community Council- Cleaning of the wall around the War Memorial £175
9. Strath Halladale Hall- Re-roofing of the village hall £3,388
10. Highland Council Small Works- Bus parking at the Tourist Information Centre in Durness £5,495
11. Highland Council Small Works- Creation of car park at Skerry Church and burial ground £1,000
12. C & S Footpath Initiative- Improvement of access at Farr Beach, Bettyhill £1,500
13. C & S Footpath Initiative- Stone steps at Bharrich Castle, Tongue
14. Highland Council Footpath Project- Talmine Upper to Lower £475
15. Highland Council Footpath Project- Scourie Beach Access (Durness) £1,490
16. Highland Council Footpath Project- Ceannabienne Beach Access (Durness) £1,340
17. Highland Council Footpath Project- Scourie Playing Field Access £2,080
18. Sutherland Footpath Initiative- Replacement of bridge at West Strathan, Tongue £2,893
19. CASE and SNH, Golspie- Footpath audit of CASE area, to determine the way forward for footpath development and to co-ordinate a strategy for the long-term development and sustainability of this resource in the area £7, 900

For the period September 1997-August 1999 the following grants supporting 'innovative business and resource management schemes' were provided by CASE in North Sutherland:

1. Highlands and Islands Agricultural programme- Angela Mackay, Tongue, given £470 toward the purchase of grading equipment for oyster farm
2. Finance For Business- C & J A Marsham, Durness, provided with £1,600 toward the purchase of an oxygen plant
3. Finance For Business- Malcolm Morrison T/as George Douglas & Co, Forsinard was given £700 toward the upgrading of mobile cattle handling facilities.
4. Tourism Infrastructure- RSPB, given £1,038 toward interpretation at Forsinard Visitor Centre.
5. Tourism Infrastructure- Highland Council, given £5,000 toward Strathnaver Archaeology Trail.

*Source: Caithness and Sutherland Enterprise Monthly Reports, Sept. 1997-Aug 1999, CASE*

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## Additional recommended indicators

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- ***Number of organic producers***

'Organic' agricultural produce – ie, grown according to strict guidelines set by the Soil Association, without synthetic fertilisers or chemical pesticides –has been shown to be a niche product which can be sold at a premium compared to normal produce. The degree to which Pilot Area crofters are taking advantage of this market can be monitored over time.

To date, no information is available on this issue in North Sutherland. Some original research may be required to establish a complete record of organic crofters in the pilot area.

- ***No. of woodlands under the UK Woodland Assurance Scheme***

Woodlands under the UK Woodland Assurance Scheme sets out standard requirements for sustainably managed forestry areas. To date, no information on the above indicator for the North Sutherland area could be obtained from the Forestry Commission, but further requests may result in successful data release.

- ***Stocking densities***

The density of cattle or sheep on grazing areas will play a significant role on the status of the land on which they feed. A balance needs to be struck between the carrying capacity of the land and the economic needs of the resident crofters. Monitoring of stocking densities will help determine which way the balance is swinging. To date, no indicator of stocking density has been maintained by official bodies.

- ***Index of grazing pressure***

Similar to stocking density above, an indicator of grazing pressure can help determine whether an area has reached or surpassed its 'carrying capacity', hence help shape agricultural management activities. Contributions to this grazing pressure can come from diverse sources including deer and sheep. There are many inter-relating factors contributing to grazing pressure and a single satisfactory index has yet to be developed.

- **Number of “green” labelled products/services**

Such products/services would relate to natural resources activities, and may include:

- organic labelled croft produce
- Green Tourism Scheme
- ecotourism or activity holidays
- farm holidays

To date, these activities are limited, but can be monitored over time as an example of sustainable use of key resources in the Pilot Areas.

The Tongue Youth Hostel is a Member of ‘Green Tourism Business Scheme’, and has received the ‘Silver’ level. To meet this level, applicants need specify 42 of over 100 possible measures for environmental improvements of their facilities.

*Source: The Green Tourism Business Scheme Members List, 2 September 1999; Green Tourism Business Scheme Guidance Notes, Scottish Tourist Board, March 1999.*

- **Number of organic fish farming projects**

Similar to organic produce, but still a relatively new concept, organic fish farming products would represent fish aquaculture without use of chemical pesticides or synthetic food additives, and with certain water flows and maximum cage densities. As for organic produce, such products can yield greater value in the market place.

#### **Objective 4: Promoting sustainable and innovative use of cultural resources**

**Key topics considered in this objective:** cultural tourism, activities, facilities, projects, products, use, productivity, events, groups, marketing, support.

Similar to Objective 3 above, this objective looks at how, and to what degree, cultural resources in the Pilot Areas are being sustainably managed and used. Because of the dynamic nature of this objective, status indicators also reflect performance, and the two categories are therefore grouped together.

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### **Status/performance indicators**

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- **Number of venues promoting cultural resources**

Availability of venues where cultural activities can occur is an indicator of the potential for cultural events. In general, all Village Halls and some schools within the North Sutherland Pilot Area get involved in promoting cultural resources to varying degrees. Below is a list of identified venues.:

1. Skerry Village Hall- Northlands Festival/Drama and literature<sup>1</sup>
2. Durness Village Hall- Drama and literature<sup>1</sup>
3. Melness Community Centre- Illustrated Talks<sup>1</sup>
4. Strathnaver Museum<sup>1</sup>
5. Strathy Village Hall<sup>2</sup>
6. Durness Tourist Information/visitor Centre<sup>3</sup>
7. Balnakeil Craft Village<sup>3</sup>
8. Bettyhill Visitor Centre<sup>4</sup>
9. Taigh Na Gaidhlig Mhbalanais- Gaelic House/local resource centre, Melness<sup>5</sup>

Sources: <sup>1</sup>The Macallan ‘What’s On,’ Spring, Summer, Autumn and

*Winter editions, 1999. Published by HI Arts ;<sup>2</sup> Conversation with Mr Donald Mcleod, North West Sutherland Council for Community Action, 11 October 1999;*

*<sup>3</sup>Sandra Peterkin, The Highlands of Scotland Tourist Board, 30 September 1999;*

*<sup>4</sup>Sutherland Pilot Area profile, produced by The Highland Council;*

*<sup>5</sup>Brian Mcleod, Melness Gaelic centre*

- ***Use of centres and facilities***

Intensive use of an interpretative centre can potentially result in stress of the associated resource. A review of levels of perceived stress can therefore be an important measure. To date, information has not been collected in a sufficiently systematic way to permit a measured view of the quality and usage of cultural/heritage interpretation sites in North Sutherland.

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## **Additional recommended indicators**

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- ***Proportion of historic sites/monuments actively managed***

This indicator reflects the degree of activity in the Pilot Area linked to publicising and exploiting the cultural and archaeological heritage.

- ***Adaptive re-use of historic buildings***

This indicator would serve to demonstrate that historic sites or buildings do not necessarily need to be museums, and highlight other successful uses of culturally significant buildings.

# Chapter 2

## Goal 2 Retaining a viable and empowered community

### Objective 5: Retaining a balanced and healthy population

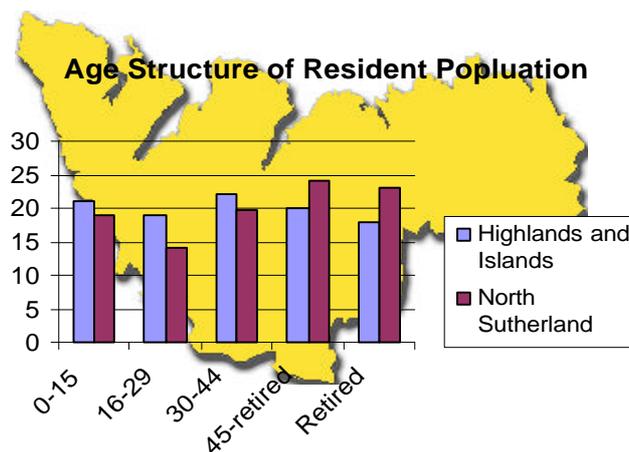
**Key topics considered in this objective:** population total/dispersal, age structure, gender balance, health, population change and support measures, health change and support measures.

The health and balance of a population is of paramount importance to the economic well being of an area, overall quality of life and to individual fulfilment. The indicators chosen aim to provide a current picture of each area.

### Status indicators

- Age structure of resident population**

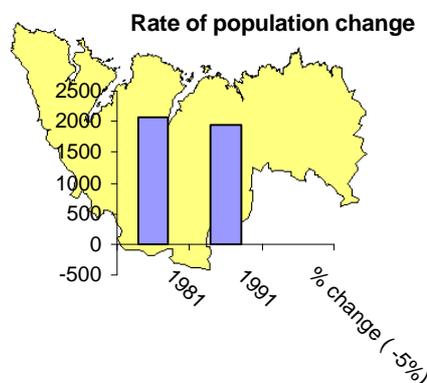
The age structure can indicate obvious gaps in the numbers of any one age group. Approximates for North Sutherland are shown in the graph below:



Source: Sutherland Pilot Area Profile, Highland Council Planning and Development Service (no date)

- % change in populations (trends, 1981-91)**

By monitoring percentage change in numbers, a community can assess the situation and where appropriate consider ways of reversing unwanted trends.



Source: Sutherland Pilot Area Profile, Highland Council Planning and Development Service (no date)

- **Gender balance in resident population**

For growth and viability, a resident population needs to maintain a relatively even gender balance, and a sufficient proportion of women of child-bearing age. The data for North Sutherland for 1981 and 1991, shows the balance to be in evenly placed between the percentage of female/male. In 1991, women of child-bearing age (taken, generally, to be between 16-44 ) constituted a healthy 33% of the total female population. This percentage closely matched that of the male population in the same age range (34%).

Year	F No's	F %	M No's	M %
1981	1187	51.5	1116	48.5
1991	991	51.0	960	49.0

Age	Female % 1991	Male % 1991
0-15	18	19.6
16-29	14.5	13.8
30-44	18.5	20.6
45 + Retired	26.5	29
Retired +	22.5	17

Source: 1981, 1991 census data, provided by Highland Council

- **% of working age population**

This provides information on the earning potential of a population, hence its economic viability. Data for North Sutherland from the 1991 census is compared below to data for the Highlands and Scotland as a whole. Working age population is taken to be the age group between 16-64.

	North Sutherland	Highland	Scotland
Number of working age population	877	99,993	2,348,795
% of total population	55	62.4	76.3

Source: North Sutherland Pilot Area Profile, Highland Council (undated)

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## Measures of Performance

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- **Uptake of young crofters to new entrants scheme**

The new entrants scheme for crofters provides 'start-up' financial support to encourage the taking up of absentee crofts in the local area. This indicator can serve as a measure of the return of people to the local area, as well as the attraction of young people to crofting .

For North Sutherland, 26 new entrants under the Crofts Entrants Scheme were recorded in 1999: total grant support of £159,967. It is unclear whether these were young crofters.

Source: letter from J Kerr, Crofters Commission, 15 September 1999.

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## Additional recommended indicators

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- **Health Indicator**

An indicator providing a measure of the health of Pilot Area populations is being sought, but to date none has been agreed on which would be meaningful given the small size of the population considered, and the confidential nature of much health information.

- **Number of initiatives to encourage “young returners”**

The drain of young people from the Pilot Areas is one of the main concerns voiced by residents. By monitoring the opportunities and initiatives to encourage the return of young people, the effort being made to reverse the trend can be assessed. Original research and community-based research may be required for this indicator.

### **Objective 6: Supporting community empowerment**

**Key topics considered in this objective:** community-decision making, control of land and natural resources, access to funds, access to information, skills and expertise, community activity, functioning of democratic structures, local groups/activities, changes in land tenure, funding mechanisms, information provision, primary, secondary, tertiary education provision/uptake.

The involvement of local communities in decision making and the improvement of local democracy and individual citizen involvement in the local political process, are key features of sustainable development. The indicators linked to this objective reflect the initiatives or ongoing activities aimed at increasing communications and action within communities.

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## **Status indicators**

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- **Number of community organisations (societies, clubs, volunteer groups)**

This reflects the current activity level within the area, and the opportunities for residents to become involved.

No listing of community organisations is maintained for the North Sutherland area. From conversation with local Council members, it is understood that there are approximately 8-10 community/voluntary groups per sub-area within North Sutherland, for a total of approximately 40-50 organisations.

*Source: Conversation with Mr Ron Celli, Chairman of Bettyhill, Strathnaver and Altnaharra Community Council 10 October 1999; Conversation with Mr Donald Mcleod, Secretary North West Sutherland Council For Community Action, 22 November 1999.*

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## **Measures of performance**

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- **Number and amount of LEC provided Community Action Grants**

Community Action Grants are funds made available by the Local Enterprise Companies to community groups, to improve facilities for local people. The degree of funding is indicative of the effort being put into improving the community infrastructure.

For the period September 1997- August 1999, the following Community Action Grants were provided by CASE for the North Sutherland Area ( representing approximately £5.00 per head of population)<sup>1</sup>:

- North Coast Leisure Pool, Bettyhill- £2,330
- Melvich Village Hall Committee- £772
- Melvich Playgroup- £989
- Tongue Community Council- £255
- Strathnaver Museum- £280
- Durness Swimming, Fitness and Leisure Group- £666
- Naver Teleservice Centre, Bettyhill- £1,372

- Durness Community Council- £808
- Melness Crofters' Trust- £470
- North West Council for Community Action- £430
- Bettyhill and District Pipe Band- £997

For the period 1998-99, average Enterprise contributions to Community Action Grants within the Highland Council area were a total of £155,413.8. This corresponds to £1.55 per capita<sup>2</sup>:

Area	No. projects	Value of Approvals (£)	Average LEC Contribution (%)	Average value of LEC contribution
Argyll & Islands	56	224,900	13.7	30811.3
<i>Caithness &amp; Sutherland</i>	<i>44</i>	<i>152,200</i>	<i>21.6</i>	<i>32875.2</i>
Inverness & Nairn	27	117,800	14.6	17198.8
Lochaber	24	88,700	6.0	5322
Moray Badenoch & Strathspey	28	105,100	19.6	20599.6
Ross & Cromarty	54	248,300	17.1	42459.3
Skye & Lochalsh	23	43,600	14.1	6147.6

Source: <sup>1</sup> *Caithness and Sutherland Enterprise Monthly Reports, Sept 1997-Aug 1999*

<sup>2</sup> *Highlands and Islands Enterprise 8<sup>th</sup> Report, 1998-99*

- ***Number of Crofting Township Grants awarded by Crofters Commission***

The Crofting Township Grant Scheme requires local crofters and townspeople to agree together on a funding request to improve the local township. The number of grants awarded is a clear representation of the degree of local interaction, especially between groups who may not otherwise have opportunities for discussion.

For North Sutherland in 1999, Crofting Township Development Scheme grant awards were as follows:

- No. of approvals- 5
- Total Grant Support- £311,552
- Crofters Contribution Payment- £87,793
- Crofters Township Development Scheme Incentive- £22,239

Source: *Letter from John Kerr, The Crofters Commission, September 1999.*

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## Additional recommended indicators

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Other potential indicators of the degree of community empowerment, for which no information can be gathered at this time, are listed below. Their community-specific nature requires original research for quantification. Some information on community indicators is provided in Objective 16.

- ***No. of communities taking part in community planning process***  
This shows the degree of local participation in the planning process
- ***No. of Grazing Committees meetings/ activities***  
Grazing Committees play a key role in the management and planning of crofting communities. The number of meetings and activities undertaken reflect the degree of activity within the community.
- ***Number of community initiated projects***  
Again, a reflection of the degree of motivation and activity within the community
- ***Area of land under community ownership***  
This is an indicator of the level of a community's control of its environment.

In addition, certain indicators linked to other objectives presented in this profile report are also partly related to community empowerment. They include:

- ***Access to information, skills and expertise***  
Objective 8 covers availability of essential services  
Objective 11 addresses the availability of Information Technology (IT) links in the Pilot Area
- ***Education provision and take-up***  
Objectives 7,8 discuss location of schools and fate of school leavers

### ***Objective 7: Ensuring equal access to employment***

**Key topics considered in this objective:** employment (levels/age/gender), range of jobs, dispersal of jobs, access to employment, employment training, childcare provision, employment changes and support measures, skill base, Investors in People (IIP), business start-up.

Work is an enormously important aspect of the lives of individuals, and where this is lacking it can have clear and measurable effects on households and communities. Employment is, therefore, a fundamental requirement for a viable community. Employment structure is also important and reflects historical and present day trends. It will clearly be influenced by the environmental surroundings, in particular the natural resources and access to them. The availability and categories of employment, the ease of access to it, and the opportunities to prepare for it, are therefore important indicators to monitor.

## Status indicators

- **% unemployment**

This is an obvious indicator of economic viability of a community.

Employment in the North Sutherland area shows some seasonal variations. Unemployment rates are slightly below those for Highland as a whole for both 1991 and 1997. The more recent data is shown here.

### Percentage Unemployment 1997

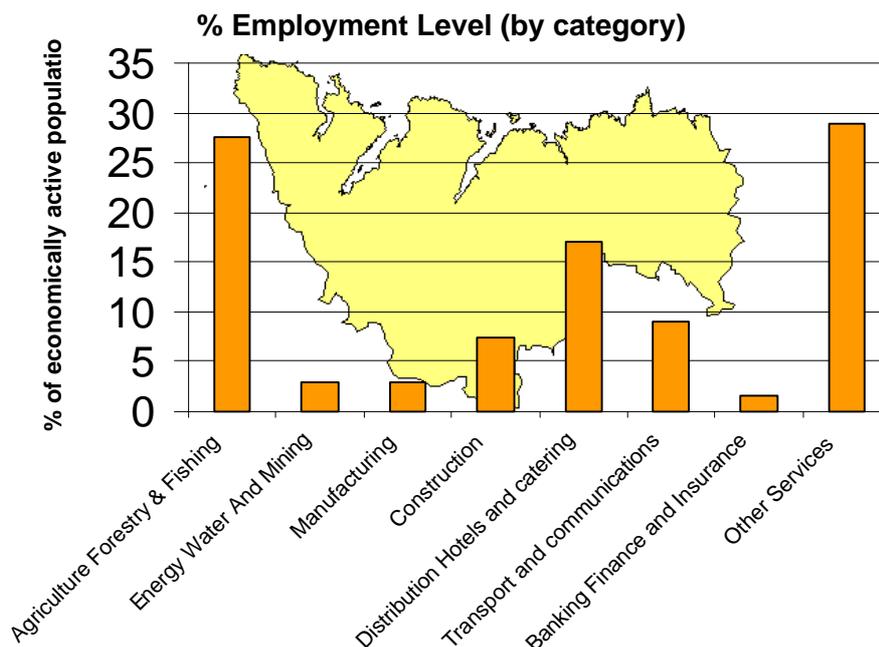
	Q1	Q2	Q3	Q4
North Sutherland	8	7	5	6
Highland	10	8	7	7

Source: North Sutherland Pilot Area Profile, Highland Council (undated)

(NB: numbers are estimated from graph information)

- **% employment levels (by category)**

The Dùthchas Pilot Areas are aiming to break free from a focus on seasonal, tourism-related employment, or a primarily agriculturally-based economy. Diversity of employment is an important indicator for the future since this can provide some resilience against recessionary pressures. By monitoring employment categories, and changes in numbers employed in each, the viability of the economic base of the Pilot Areas can be determined.



- **Number of adult training facilities**

Skills training can be vital as preparation for employment, and can provide increased opportunities.

Thurso College, Ormilie Rd. Caithness is the key Outreach Provision available to the North Sutherland Pilot Area. In addition to running courses on site, the College provides computer, monitor, printer, e-mail and internet connection through its College Outreach project, to permit distance learning at various locations in North Sutherland, namely:

- Naver Tele-Cottage;

- Strathy. A mentor is employed in the Strathy area to encourage students and give them basic instruction on the use of the computer equipment;
- Farr Secondary School (only the internet/e-mail connection and running costs are paid by Thurso College).

In addition, eighty students from the North Sutherland area are recorded as enrolled in a variety of courses at Thurso College in 1999.

Source: Faxes from Jasmin Grant, Thurso College 21 September 1999 and 6 October 1999.

- *% of school leavers going to university/further education*
- *% of pupils going to something other than unemployment*

By monitoring the fate of local young people upon completion of their secondary studies, one can assess the availability and the take-up of opportunities in the local area.

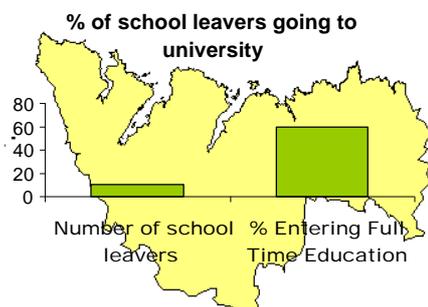
Detailed data on destination of school leavers for the whole of Caithness and Sutherland for the last three years is given below. Although the data is not specific to the North Sutherland Pilot Area, it provides trends for the region.

**Percentage of School Leavers in Caithness and Sutherland going to different destinations**

	1995/96	1996/97	1997/98
Total Numbers	525	504	513
Higher education	26.7	27.6	29.8
Further education	20.2	20.2	16.6
Training	18.1	5.2	9.4
Employed	18.5	36.3	32.5
Unemployed	3.8	6.1	4.9
Unknown/Others	12.7	4.6	6.8

Source: Highland School Leaver 1997-98, Highland Careers Services

Farr High School is the only secondary school within the Pilot Area, but it cannot be assumed that all primary students for the area would have continued there. In 1997/98, there were ten school leavers from Farr High School, and 60% of these entered full-time higher education.



Source: Fax from Yvonne Henderson, Highland Council Education Service, 1 October 1999

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## Measures of performance

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- **Number of new start-up businesses and grants allocated**

The Local Enterprise Companies are a source of funding for new businesses. The amount of such funding provided for the Pilot Areas serves to measure the entrepreneurial spirit of the area, and the development of new employment opportunities.

For the period September 1997-August 1999, the following business start-ups were assisted by CASE<sup>1</sup>:

1. Tracy Dawkins, Forsinard - Tracy's of Forsinard (Seamstress)
2. William Mackintosh, Skerray – Operating a mobile timber mill to manufacture fence posts, gate rails etc. 'on site' at forests throughout Caithness and Sutherland
3. Kevin Crowe – Loch Croispol Bookshop and Restaurant within the Balnakeil Craft Village
4. Lorna Mackay, Bettyhill – Torrisdale Trekking. Will target local and tourist market in the Bettyhill area

For the period 1998-99, there were 191 Business Start-Ups within the Highland Council area that were assisted by Local Enterprise Companies. This averages out at 0.0019 per head of population<sup>2</sup>:

Area	Number
Argyll & the Islands	83
Caithness & Sutherland	19
Inverness & Nairn	23
Lochaber	9
Moray Badenoch & Strathspey	27
Ross & Cromarty	17
Skye & Lochalsh	13

Source:<sup>1</sup>Caithness and Sutherland Enterprise Monthly Reports, Sept. 1997-Aug. 1999

<sup>2</sup>Highlands & Islands Enterprise 8<sup>th</sup> Report, 1998-99.

- **No of Investors in People (IIP) recognitions per area**

The Investors in People National Standard is a practical way in which businesses can improve their performance, by training and developing their employees. A high number of IIP businesses represents a community where employees are provided with opportunities to improve their skills and abilities.

For the period September 1997-August 1999 a total of 37 companies/organisations within Caithness and Sutherland achieved IIP status recognition. Of these, none appear to fall within the Pilot Area<sup>1</sup>.

For the period 1998-99 a total of 235 IIP recognitions and 263 commitments were recorded for the Highlands and Islands as a whole<sup>2</sup>.

Source: Caithness and Sutherland Enterprise Monthly Reports, Sept. 1997-Aug 1999

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## Additional recommended indicators

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Additional indicators of the degree of access to employment, for which original research may be required to obtain viable data, include:

- **Dispersal of employment opportunities**

A viable community will not concentrate its employment opportunities in one or two key locations, but will ensure that employment, within a variety of categories, is available throughout its area.

- **Availability of child care**

Child care is an essential requirement to free parents in need of double income for economic viability. The availability of inexpensive, subsidised childcare is therefore an important measure.

### Objective 8: Ensuring equal access to essential services

**Key topics considered in this objective:** housing, utilities (power, telecoms, sewerage etc), services (Post Office, shops, doctors), care provision (child, disabled, elderly), changes, initiatives and support for the above.

If access to essential services is limited in any way this tends to create “underprivileged” households or even whole areas. This is a barrier to a sustainable future, which aims to ensure that all members of society have access to those services and opportunities that can allow them to achieve their personal potential. The indicators selected below give an indication of the availability of services, and the ease of access to them.

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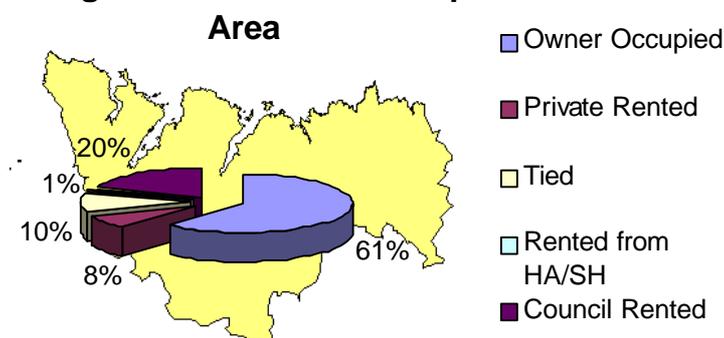
## Status indicators

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- **Rented vs owned homes**

The percentage of home ownership can indicate the degree of stability and security within an area, as well as some indication of the availability of affordable housing. Household tenancy rates in the Sutherland Pilot Area were recorded during the 1991 Census and are shown below:

### Housing Tenure in Sutherland pilot



Source: data from 1991 census presented in North Sutherland Pilot Area Profile, Highland Council (undated)

- **Number of essential services**

Certain public services are viewed as ‘essential’ for a community, and can be used as a benchmark to determine its sustainability. Such services include GP, post office, food shop, petrol station, recreational facilities, and primary and secondary schools. Few communities within the Pilot Areas are within easy reach of all such services. By establishing the baseline situation it is possible to identify the important gaps which will need attention in the future.

The map below shows available services in the Pilot Area.



Source: North Sutherland Pilot Area Profile, Highland Council, undated

- **Bus frequency per sub-area in each pilot area**

Frequent, reliable public transport is a key requirement within the Pilot Areas, especially to facilitate access to essential services that may not be locally available.

In general, in the North Sutherland Pilot Area, bus frequencies range between 1-2 buses per day to less than 1 bus per day in some areas.

Source: North Sutherland Pilot Area Profile, Highland Council, undated.

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## Measures of performance

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- **Housing Grant take-up**

Grants are available from the local Council for housing improvements, which are most frequently linked to insulation. A measure of the degree of take-up of such grants will give some indication of the effort placed within the Pilot Areas for improving housing facilities.

Within the North Sutherland Pilot Area, it is estimated that £85,000 per year, over the past 5 years, has been provided in grants for housing improvement. This amounts to between 25-30

households per year receiving Housing Improvement Grants, for an average award of approximately £3,000 per household.

*Source: Communication with Ron Mackray, Highland Council Protective Services, 30 September 1999*

- ***Degree of implementation of local integrated transport planning initiatives***

Integrated transport allows ease of connection between different services, eg distinct bus lines; ferries and buses; flights and buses. The degree of integration is a measure of the level and quality of public services available.

In North Sutherland, an integrated transport planning policy is not in action. However, under the Government's Rural Transport Initiative, Highland Council are currently considering and implementing solutions to enhance public transport services in the Highlands. As part of this activity, a report was commissioned from the University of Aberdeen in January 1999, to provide recommendations for rural transport initiatives specifically in the North Sutherland area.. The report highlighted the following:

- The need for more unconventional, personalised services such as door-to-door buses for the elderly, rather than an increase in frequency of existing lines.
- Better focusing of the times of the existing bus routes to reflect current need habits, eg evening bus services to allow access to local pool, evening classes and other social activities.

The recommendations are being progressed at the time of writing by the Roads and Transport Department of Highland Council.<sup>1</sup>

Other integrated transport initiatives currently under way<sup>2</sup>:

- The Rural Transport Fund is used extensively in the Highland area to develop services.
- A Help the Aged minibus has been run on Bettyhill for several years.
- Sutherland Partnership have a Community Transport Co-ordinator who is developing two further projects on the north coast, in conjunction with the Social Inclusion Partnership in the area.

*Sources: <sup>1</sup>Department of Geography, University of Aberdeen: Highland Council Rural Transport Initiative: Recommendations for North and West Sutherland, January 1999;*

*<sup>2</sup>Communication from David Summers, Roads and Transport, the Highland Council, 17 September 1999*

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## **Additional recommended indicators**

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Other essential services that can serve as indicators of sustainable communities include:

- ***Sewerage Provision*** – Many of the residents in more remote areas are provided with septic tanks. These may have limitations in some situations, as external support is required for periodic emptying.
- ***Power/Telecommunications*** – Although very few if any residents in North Sutherland are not supplied with electricity and telephone lines, the reliability of these lines may suffer, especially in severe weather, and the distance of some locations from support centres may result in residents being disconnected for some time.

- *Radio/TV Reception* – Remote communities may not be able to obtain a clear reception for telecommunication, due to distances from relay points. Radio and television may represent the only links to the ‘outside world’ in some locations.
- *Care Provision* – Distinct from GP facilities or availability of hospitals, this indicator reflects the availability of visiting nurses or caretakers, as well as the proximity of nursing homes or care centres. In an area with an increasing percentage of ageing population, such services may be considered essential.

## Chapter 3

### Goal 3 Reducing problems of remoteness by delivering local needs locally and reducing dependence on external inputs

#### **Objective 9: Improving the local market for goods and services**

**Key topics considered in this objective:** local goods, local services, local markets, local retail/wholesale outlets, local marketing schemes; uptake, changes, supports.

Some of the issues stemming from the remoteness of the Pilot Areas can in part be addressed by improving the local market for locally supplied goods and services. Greater local provision of local needs also meets other sustainability goals, by reducing transportation needs and improving local employment.

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#### **Status indicators**

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- **Number of local producers supplying locally and number of local markets/outlets**  
A focus on selling locally rather than exporting can provide the local community with supplies, whilst decreasing transport costs for producers.

At this time, limited information has been obtained on local suppliers for the North Sutherland area:

- A small shop similar to a co-op has apparently been set up as a community initiative to buy and sell local produce, arts and crafts etc.
- A handful of local hotels are known to be selling some local produce, in Melness, Strathy and Tongue.

*Source: Communication with Ron Celli, Chairman Bettyhill, Strathnaver and Altnaharra Community Council, 1 October 1999*

- **Number of local transport companies**  
An example of how local transport needs may be serviced by local enterprise, thus providing local employment whilst serving local needs.

The known local transport companies in North Sutherland are:

- a daily milk and message delivery run service in Borgie
- 'Burrs of Tongue', a very old family business doing odd deliveries.

*Source: Communication with Ron Celli, Chairman Bettyhill, Strathnaver and Altnaharra Community Council, 1 October 1999*

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#### **Measures of performance**

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- **Number of new start-up businesses servicing local needs**  
This indicator measures the potential for local needs to be serviced locally, thus reducing transport and import.

For the period September 1997-August 1999, the following business start-ups involved in servicing local needs were assisted by CASE:

1. Tracy Dawkins, Forsinard – ‘Tracy’s of Forsinard’ (seamstress)
2. William Mackintosh, Skerray – Operating mobile timber mill, whereby he can manufacture fence posts, gate rails etc. ‘on site’ at forests throughout Caithness and Sutherland

And to a lesser degree:

3. Kevin Crowe – Loch Croispol Bookshop and Restaurant within the Balnakeil Craft Village
4. Lorna Mackay – Torrisdale Trekking. Will target both local and tourist market within Bettyhill area.

*Source: Caithness and Sutherland Enterprise Monthly Reports, Sept 1997-Aug 1999.*

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## Additional recommended indicators

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- ***Number of boxing schemes***  
Boxing schemes stimulate local consumption of fresh produce, through direct supply by producers, and are therefore an example of local needs being serviced locally.
- ***Percentage of workers whose place of work is within Pilot Area***  
People working locally are maintaining and sharing skills and knowledge within their community, whilst satisfying local needs. This is an effective example of sustainable development.
- ***Number of local direct marketing opportunities***  
This is another indicator for measuring the potential for the growth and development of local businesses and services.

### ***Objective 10: Promoting equal and effective access to goods, services and markets***

**Key topics considered in this objective:** transport infrastructure, public transport, car ownership, fuel prices/availability, integrated transport links, subsidised transport, changes/initiatives/supports for the above.

Because travel is increasingly being taken for granted by individuals and businesses, society is becoming dependent on effective transport systems. This is even more pronounced in remote areas and communities.

The degree of public transport availability and how well it is integrated indicates the ease with which goods and services can be accessed. The issue here, in contrast with Objective 8, is accessibility *outside* the Pilot Area. The challenge here is to meet economic and social needs for access to facilities in ways that do not place unacceptable burdens on the environment.

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## Status indicators

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- ***Cost of fuel per journey distance to nearest larger town (Inverness)***  
A rough estimate of the distance from Melvich, the furthest point in the North Sutherland Pilot Area, to Inverness is approximately 190 km. The cost of such a journey is compared below to the cost of a trip to Edinburgh/Glasgow for an inhabitant of the Central Belt (living approximately 40 km from either city):

	North Sutherland	Central Belt
Total driving distance to nearest large town (approx) <sup>1</sup>	<b>190 km</b>	<b>40km</b>
Average price of fuel	£4.00/gallon <sup>2</sup>	73 p/l
Conversion assuming imperial gallons (4.55 l)	87.9 p/l	73 p/
Average value for vehicle efficiency <sup>3</sup>	30 miles/gallon	30 miles/gallon
Conversion assuming imperial gallons (4.55 l)	10.62 km/l	10.62 km/l
Required fuel for journey Melvich-Inverness return	35.8 l	7.5 l
<b>Cost of fuel for return journey</b>	<b>£31.45</b>	<b>£5.50</b>

Sources: <sup>1</sup>Road Atlas Great Britain, AA 2000

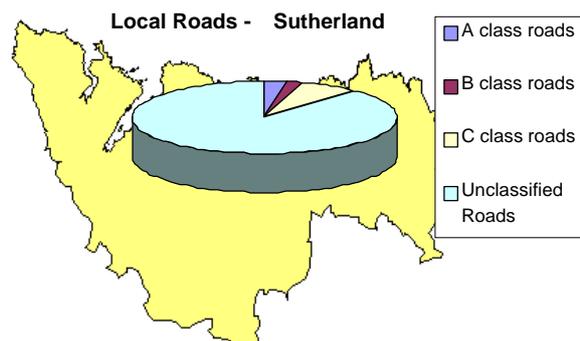
<sup>2</sup> conversation with Ron Celli, Chairman Bettyhill, Strathnaver and Altnaharra Community Council, October 1999

<sup>3</sup> conversation with AA representative, Basingstoke

- **State of local roads (Grades A, B, C, U)**

This is a representation of ease and cost of access to greater markets. In North Sutherland, local roads are classified as follows:

- There are three A Class Roads: A 836, A838, A897; all are single track with passing places, except for a stretch of the A836 along the north-west coast;
- There are two B Class Roads: B871, B873; both are single track with passing places;
- There are 8 C Class Roads
- Unclassified Roads – 99



Source: E-mail from Mr Ron Munro, Highland Council, 21 September 1999

## Measures of performance

- **Degree of implementation of local integrated transport planning initiative** (see description under Objective 8 above)

## Additional recommended indicators

- **Available level of public transport beyond the Pilot Area**
- **Degree of integration between public services**  
The frequency of buses and trains to centres such as Aberdeen and Inverness provides a more sustainable form of access to greater markets and wider resources. The ease of transfer from one transport system to another, through designed connections, maximises the availability of transport to the community. Both of these pieces of information require some local research.

- ***Car-sharing schemes***

Organised car-sharing schemes can render transport available to people who may not own cars. Many such schemes may be informal and it may therefore be difficult to obtain information about them.

### ***Objective 11: Providing an adequate Information Technology (IT) resource***

**Key topics considered in this objective:** IT infrastructure, access to IT, training for IT, levels of use, levels of skill, levels of awareness.

The use of IT is rapidly becoming recognised as an effective way of accessing information and communicating from remote areas, and is regarded as a key means by which people and communities can fulfil their potential. IT connection, availability and use can breach distance and allow access to information and markets. Availability of IT facilities to the local community, and courses to increase usage, are therefore key indicators.

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## **Status indicators**

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- ***Number of IT centres***

The Naver Teleservice Centre located in Bettyhill offers IT outreach courses provided by Thurso College, as well as secretarial and training services; e-mail and internet; and 'rent a desk' facilities.

*Source: Fax from Laura Mackay, Business Information Source, Caithness and Sutherland Enterprise re. IT companies, 17 September 1999*

- ***Number of UHI access points***

Thurso college outreach provision in North West Sutherland currently uses four access points: Naver Tele Cottage, Far Secondary School, Forsinard Reserve and Strathy.

*Source: Fax from Jasmin Grant, Thurso College, 21 September 1999*

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## **Measures of performance**

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- ***Provision of IT training courses available, and IT training requested***

Courses offered through the Thurso College Outreach Project included Introduction of Computer Applications; approximately 15 students were enrolled. Business Planning, Business Numeracy, Computer Applications and Word Processing are planned for the year 2000.

*Source: Faxes from Jasmin Grant, Thurso College, 21 September 1999 and 6 October 1999.*

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## **Additional recommended indicators**

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- ***Number of users of local IT centres***
- ***Number of community web sites***
- ***Number of business web sites***
- ***Extent of ISDN access***

The first three indicators provide information on the degree by which the Pilot Area is taking advantage of IT as a resource. The fourth reflects the ease of access to IT facilities in the area. Original research or IT searches may be a means to obtain this information.

### **Objective 12: Reducing reliance on imports and subsidies**

**Key topics considered in this objective:** imported goods, imported services, imported skills, levels of public subsidy, changes in levels of imports/use, uptake of subsidy, initiatives to reduce levels of imports.

Heavy reliance on imported goods together with imported skills and services tends to reinforce the disadvantages of living in remote areas, and is usually reflected in the higher cost of living. This is further reflected in the levels of public subsidy. The goal of the indicators for this objective is to assess the current degree of reliance within the Pilot Area, and monitor changes and potential decreases over time.

Information on this topic is scarce, especially with regards to levels of imported goods and skills. Original research is recommended to carry out a full assessment of this topic.

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## **Status indicators**

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- **Amount of EU funding**

EU funding provided to local areas comes in a variety of forms, including pan-Highland grants, and area-specific grants. LEADER grants and Objective 1 grants are specific categories of EU funding, administered by Local Enterprise Companies, that play an important role in the local economy.

The following two EU grants were provided to the Highland Council specifically for activities within the Sutherland area, and are currently ongoing:

- £94,000 towards the Melvich Industrial Estate, as 40% award towards total development costs.
- £125,000 towards Strathy Village Hall Renewal Programme, as 50% of total project costs

Numerous other pan-Highland projects funded by the EU may also affect the area.

*Source: List of EU funded initiatives from Highland and Islands Partnership Programme, 29 September 1999*

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## **Measures of performance**

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- **Level of skills import**
- **Level of goods import**

Although difficult to monitor, these indicators can provide a clear picture of the degree to which a Pilot Area is dependent on external inputs. The level of skills import is a reflection of the professional expertise that is required locally but cannot be obtained among the local workforce. Similarly, the numbers and types of goods imported may indicate the limitations of local agriculture, climate or manufacturing facilities.

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## Additional recommended indicators

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- *Number of crofters taking up agricultural subsidies*  
The main source of subsidy in the area is the Scottish Executive for Rural Affairs Department (SERAD), via agricultural grants. Information on grants given to individual crofters or in specific sub-areas of Scotland is considered confidential and is not available.

## Chapter 4

### Goal 4      **Avoiding harmful effects on other people, places and future generations**

#### **Objective 13: Supporting the wise use of energy**

**Key topics considered in this objective:** renewable energy, energy efficiency, changes, initiatives, support for the above.

Energy enables people to provide for their well-being, health and safety and is a key factor in the local economy. The production and use of energy has the potential to have a significant impact on the environment at both a global as well as local level. There is a need, therefore to focus on improvements in efficiency and conservation as a means of implementing our sustainability goals. Renewable energy sources (wind, sun, wave, biomass and water) offer additional opportunities if these are pursued where it is technically, economically and environmentally sensible to do so.

Although limited activities are currently occurring in renewable energy in the Dùthchas Pilot Areas, by monitoring the suggested indicators over time, improvement trends can be established.

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#### **Status indicators**

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- **Number of renewable energy projects**

There are currently no renewable energy projects in the North Sutherland Pilot Area. A study undertaken by Scottish Hydroelectric plc et al in December 1993 reviewed the potential renewable energy resource in Scotland. According to the study results, for the whole of Sutherland, the following *theoretical* renewable energy resource was identified:

Form of energy	Resource available at less than 10p/kWh (discounted at 8% over 20 years)
Wind	8424
Hydro	95
Wave	2

After taking account of planning, environmental and practical issues, the theoretical renewable energy resource in Sutherland is estimated at between 600-1,000 MW (resource at less than 10p/kWh, discounted at 8% over ten years). It is obvious that wind power is the most promising and significant source of renewable energy to pursue in Sutherland.

The feasibility of renewable energy also depends on available infrastructure. Within the district of Sutherland, the transmission system is relatively sparse, with a double circuit 132 kV line running up the east coast, and single circuit 132 kV line running down the side of Loch Shin. The 275 kV single circuit line from Beauly to Dounereay also crosses the district, but there are no 275 kV substation, and the nearest major 275 kV node is at Beauly.

*Source: Scottish Hydro-electric plc, Scottish Power plc, Department of Trade and Industry, Scottish Office, Scottish Enterprise and Highlands and Islands Enterprise, An assessment of the Potential Renewable Energy Resource in Scotland; December 1993.*

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## Measures of performance

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- **% of power from renewable sources**

Use of electricity from renewable resources indicates a sustainable approach to energy consumption.

At this time it is impossible to disaggregate the percentage of power from renewable resources provided to the North Sutherland Pilot Area specifically. Data on fuel mix use during 1997/98 for Scottish Hydro-Electric (country-wide) is shown below:

Fuel Source 1997/98	Mix (%)
gas	53
nuclear	20
renewables	14
coal	12
oil	1
<b>Total</b>	<b>100</b>

Source: *Scottish Hydro-Electric Environmental Report, 1998*

As Scottish Hydro-Electric is the principal supplier of electricity in Sutherland, one can extrapolate these values, very generally, to the Pilot Area.

- **Level of investment in insulation (private houses)**

This indicator reflects the Housing Improvement Grants provided by the local Council and gives some indication of energy efficiency measures being taken by individual householders. The information was provided for North Sutherland in relation to Objective 8, as a reflection of housing condition.

### **Objective 14: Promoting waste minimisation and management**

**Key topics considered in this objective:** waste management, waste minimisation, recycling, levels of activity, changes, initiatives, support for the above.

The traditional view of waste as being “refuse to dispose of” has been changed in enlightened sustainable communities. There is now an increased recognition that the disposal of waste can harm other people and places and create a liability for future generations. In addition, the actual commercial and economic value of recyclable waste is becoming recognised. The following approach, known as “the waste hierarchy”, is being introduced:

- reducing the amount generated in the first place;
- reusing waste items;
- recovering and recycling waste;
- disposal of residual wastes safely.

Recycling may not be a viable option in remote areas of the Highlands and Islands at this time, as the limited volumes which may be collected may not be sufficient to justify travel and transport by recycling operators. Similarly, the siting of a dedicated recycling plant in the local area may not be economically viable if not enough waste is generated locally.

The indicators selected here reflect activities which may be ongoing to minimise or recycle waste, and to raise awareness levels in the local area. To date however, it is understood that relatively little is occurring in the area of waste recycling or minimisation. Indicators are recommended only at this time, because of the lack of activity.

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## Recommended status indicators

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- *Quantity of waste by material type*
- *% of waste going to each of the “hierarchy” options (above)*
- *Distance travelled by waste*

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## Measures of performance

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- *Number of waste minimisation schemes and successful waste minimisation initiatives*  
Such schemes are likely to be sponsored by the local Council or by volunteer bodies. Waste minimisation may be more appropriate than waste recycling as a goal for remote areas.

Again, at this time no waste minimisation schemes are in place in North Sutherland.

- *Number of recycling centres within and in proximity of the Pilot Area*  
Recycling centres are represented on the one hand by bottle banks and newspaper recycling points; and on the other by actual recycling plants which collect the waste and re-process it for re-use.

With regards recycling points, these do not need to be present within the Pilot Areas, as long as they are within a reasonable distance, or at locations also offering other services. However, at this time, no recycling plants or recycling centres are thought to be present in North Sutherland.

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## Additional recommended indicator

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- *Ratio of quantity of material minimised to quantity of waste disposed, by waste type*  
Although difficult to obtain, this information would provide a good indicator of the degree of awareness and waste recycling activity occurring in the Pilot Areas.

### **Objective 15: Supporting ‘green’ business and community initiatives**

**Key topics considered in this objective:** green produce, green business, green labelling, product development, environmental management systems, awareness raising.

Businesses are recognising that positive environmental resource management together with the support of ethical practices can bring substantial economic benefits. Such benefits are attractive irrespective of the size of business, although the process of achieving them can be complex and some smaller enterprises may require assistance. In recent years there has been a rapid increase in so-called “green” or “environmentally friendly” products which has become a significant growth industry. The involvement of business in the move towards a more sustainable future is absolutely crucial.

‘Green’ initiatives may still be relatively novel within the Pilot Areas, but their monitoring over time will be vital to determine the drive towards a more sustainable future.

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## Status indicators

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- ***No. of green labelled products available***

Green products/services may reflect recyclable content, organic origin, low energy consumption and other design parameters for preventing or minimising environmental impact or damage caused by the product/service. Available information on such products in North Sutherland - including organic produce - was covered under Objective 3 of this Profile.

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## Measures of performance

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- ***Number of businesses meeting the Green Tourism Business Scheme requirements***

The Green Business Tourism Scheme provides three levels of environmental achievement for tourist facilities, visitor centres and hotels. Businesses can aim for any of the three levels to improve their environmental standard and attract environmentally-conscious tourists.

At this time, in North Sutherland, only the Tongue Youth Hostel is a successful member of the scheme. The hostel has achieved the Green Tourism Business Silver Award.

Source: *Green Tourism Business Scheme Members List, 2 September 1999.*

- ***Number of green initiatives sponsored by LECs***

Environmental Renewal grants are provided by the LECs to fund projects which repair and renew the local physical environment. See earlier description under Objective 3 of such projects for North Sutherland.

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## Additional recommended indicators

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- ***Number of fair trade products available***

These are typically produce from developing countries which have been grown, processed and exported within an ethical economic framework.

- ***Number of 'green' initiatives***

Any initiative reflecting environmental concern

- ***Number of businesses meeting green/ethical standards***

Such standards include EMAS, the European Eco-Management and Audit Scheme; and International Standard ISO 14001 for Environmental Management Systems

- ***No. of woodlands achieving the UK Woodland Assurance Scheme***

The UK Woodland Assurance Scheme grants recognition to forest areas managed in an environmentally appropriate fashion.

### ***Objective 16: Promoting co-operation with other communities***

**Key topics considered in this objective:** co-operative initiatives, inter-community links, rural-urban links, trans-national links, information exchange, national/international exchanges, awareness raising.

Communities around the world are recognising that becoming more sustainable can be accelerated through sharing ideas and experiences and exchanging “know how”. Promoting co-operation also fosters stronger communities, by allowing groups to recognise ways for improving mutual benefits and reducing harmful effects on each other. Community co-operation increases the democratic base for fighting common issues, thus ensuring mutual empowerment.

The indicators proposed here aim to determine the degree to which communities within the Pilot Areas interact with each other, and with external bodies. To date, very limited data is available on these indicators. Original research and inter-community discussion would help in data collection.

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## **Status/performance indicators**

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- *Number of inter-community meetings*
- *Number of inter-community initiatives*  
Many local community councils participate in a periodic inter-community meetings to discuss issues which reach beyond local boundaries. Joint initiatives may result, depending on the issues at hand.
- *No. of study visits/conferences attended.*  
These are opportunities for communities to learn and communicate beyond their local areas.

# **APPENDIX 2 : GAP ANALYSIS - RELATIONSHIP WITH SUSTAINABILITY**

## 1 INTRODUCTION

This Appendix presents an overall review of the profile findings and discusses them with reference to the findings of the Initial Review. In Section 2 the Goals are reviewed in turn and the section highlights where there appear to be gaps in achieving the sustainability objectives that make up each of the four goals. The gaps are then presented in Section 3 as priority issues with the key findings being divided into what might be considered as “Sustainability Challenges” and “Sustainability Opportunities”. In Section 4 the issues are arranged as suggested “Sustainability Topics” for consideration by the Programme Area Advisory Groups as a basis for selecting priority topics to take forward in their Strategies.

The methodology used to review the profiles, identify the gaps and select the priority issues is given in Appendix 3 Methodology.

## 2 REVIEW OF SUSTAINABILITY GOALS AND SUPPORTING OBJECTIVES

### GOAL 1 Making the most of natural and cultural resources without damaging them

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#### Objective 1 Protecting and enhancing natural resources and promoting their value

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##### **Status**

Overall the evidence from the available information confirms that coastal water, river water and air quality are currently all of the highest category in the North Sutherland area.

There are a relatively high number of sites of special scientific interest in the area (covering about 47%) and the unique peatland habitat covers 36% of the land area.

Woodland cover is relatively low (2%), probably reflecting in part the unsuitability of some of the area for growing trees. The area supports important breeding populations of rarer birds such as corncrake, peregrine falcon and short-eared owl.

This all supports the emphasis placed in the initial review on the quality of the fresh air, beaches, wild birds, flowers and animals and also the recognition of the importance of the peatlands.

##### **Performance**

In terms of promoting the value of the area evidence suggests that Agency and charitable trust activity is quite high with for example a major RSPB reserve (Forsinard) and SNH, the tourist board and other agencies all producing leaflets and guides for a number of nature trails.

There is also active habitat management ongoing although this is primarily focused on RSPB peatland restoration projects (in partnership with SNH and CASE). The North West Sutherland Native Woodland Project has recently initiated interest in native woodland restoration.

### **Gaps**

Possible areas for further action could be:

Increasing the areas of land under active habitat management, encouraging some diversification where appropriate and encouraging more native woodland projects.

Initiating a local area Biodiversity Action Plan, currently absent for the local area but which would take a strategic look at protecting and enhancing the already very valuable populations of wild birds, animals and plants.

Consider further ways of promoting and interpreting the natural resources in a sustainable way that capitalises on the unique features (cross-cut with Green Tourism Initiatives – see Objective 15).

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## **Objective 2 Protecting and enhancing cultural resources and promoting their value**

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### **Status**

North Sutherland has a large number of recorded sites and monuments in the area. There is a strong recognition of the importance of traditional culture but little quantified information on, for example, Gaelic speakers and the Gaelic tradition.

The evidence again supports the recognition in the initial review that the pilot area has an abundance of historic sites and a cultural tradition that the community could take advantage of to help preserve, interpret and promote.

### **Performance**

There is little quantified information on events celebrated and promotions of traditional art, music and culture. Anecdotal information, however, suggests that there may be quite a high degree of activity in general promoting the culture of the region and also a number of initiatives ( schools, classes and discussion groups) promoting the Gaelic language and tradition.

There are a number of heritage trails and small interpretation centres in the area.

### **Gaps**

Possible areas for further action are:

- Collect and record more systematic information on the cultural resources (heritage, art, music etc) and how these are currently preserved and promoted, in order to better identify gaps to concentrate on.
- Explore the scope for more specific heritage trails linked to historic sites and traditions currently undeveloped. Is there scope for a major heritage theme trail?

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### **Objective 3 Promoting sustainable and innovative use of natural resources**

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#### ***Status***

With regard to agriculture the information demonstrates that crofting is active, but there was little evidence of diversification of crofting into for example organic production or other sustainable non-agricultural activity.

Information suggests that fisheries is an important resource but there was little readily accessible quantified information to measure or access how well the resource is being sustainably managed.

Evidence suggests that there has been commercial forestry activity with grant aid support but more information is needed on the status of sustainably managed woodlands.

The status and potential for renewable energy is dealt with under Goal 4, Objective 13.

Crofting and its potential for diversification was identified in the initial review as a way of sustainably managing the land and this is supported by information collected for the profile. Evidence collected so far also supports the emphasis put on both marine fisheries and forestry as important resources for sustainable use and management.

#### ***Performance***

There is little quantified information on numbers and status of organic crofters or information relating to other sustainable non-agricultural activities that crofters could move into (habitat management schemes etc). Similarly there was no information on sustainable fisheries management initiatives, shellfish farming or organic fish farming.

There has been activity in the uptake of green grants but much of this appears to relate to Footpath restoration work.

#### ***Gaps***

Possible areas for further action:

- Crofting initiatives offer a lot of potential in areas such as organic products, “healthy meats”, other sustainably managed products etc.(see also Goal 3 Objective 9)
- Forestry developments particularly into native woodlands and participation in the UK Woodland Assurance Scheme.
- Developing fisheries opportunities (linked also to Goal 3 Objective 9); there is a lack of information here to establish an effective indicator/measure.

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### **Objective 4 Promoting sustainable and innovative use of cultural resources**

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#### ***Status/Performance***

There was found to be quite a lot of overlap with Objective 2 in the case of this Objective and a general lack of information for some of the proposed indicators.

There did not appear to be sufficient information to establish the proportion of historic sites and monuments that are actively managed. However from events calendars and discussions with local representatives of, for example, community councils it was evident that there were events celebrating local arts and music. It was also evident that for example, many of the village halls and some schools get involved in promoting cultural resources.

### **Gaps**

Possible areas for further action:

- It would be a great advantage if an efficient way of gathering and putting together the relevant information was developed so that a clearer picture of the effectiveness of the area in celebrating and promoting its cultural resources could be established.
- An assessment of how sustainable current management activities are for some of the key historic sites would also be helpful particularly for planning future developments.

## **GOAL 2 Retaining a viable and empowered community**

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### **Objective 5 Retaining a balanced and healthy population**

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#### **Status**

The information on age structure and percentage change in population indicates that a higher proportion of the population is in the more elderly or retired age range with the 16 – 29 year old showing the lowest percentage. Between 1981 and 1991 the population appears to have shown a decline of around 5%. Gender balance is around 50% male/female.

No effective indicator (at this stage) could be established for health.

The evidence obtained supports the concerns raised in the initial review over the loss of young people from the area and of a trend tending to show an overall decline in the population.

#### **Performance**

There was little information relating to initiatives aimed at encouraging “young returners” or any other measures that might help to retain young people (see also Objective 7).

The lack of an effective health indicator together with no clear information on current measures being taken to support a healthy population make it difficult at this stage to measure the overall performance of the area in meeting this objective.

### **Gaps**

**Possible areas for further action could be:**

- Establishing an effective health indicator and a way of determining trends.

- Establishing some key initiatives to encourage young returners into the area.

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## **Objective 6 Supporting community empowerment**

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### ***Status***

There was little if any formal information available on numbers of community organisations, levels of decision making, and control of land and natural resources. As a result of this much of the information was anecdotal. The indications are though that communities are active with various voluntary organisations and places to meet.

The anecdotal evidence supports the view in the initial review that the communities are generally strong with a caring, friendly community spirit.

### ***Performance***

Again there was little available information on how involved communities are in the planning process or the extent to which any land is under the ownership of the community.

There was however evidence of take-up of LEC provided Community Action Grants and Crofting Township Grants.

### ***Gaps***

Possible areas for future action could be:

- Coordinating records of community activity in the pilot area.
- Exploring ways of involving communities more in the local planning process (eg transport planning, land use planning and community planning).
- Publicising more information about access to funds, information, and skills (see Objectives 7 and 8).

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## **Objective 7 Ensuring equal access to employment**

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### ***Status***

The North Sutherland area has a lower percentage economically active population as a proportion of its total population when compared with Highland generally and the rest of Scotland. This could reflect both the higher proportion of elderly or retired people in the population and/or the loss of younger people out of the area.

Most employment tends to cluster around the agriculture/forestry/fishing or “other services” sectors. There appear to be relatively few new start up businesses during the last two years (4 as indicated by assistance from CASE).

Adult training courses are run from Thurso College and its computer outreach points.

The evidence tends to support the conclusion in the initial review that lack of employment is a major problem for the area. In particular again the retention and provision of employment for younger people is a problem.

### ***Performance***

Although precise figures were not available for the pilot area it seems by extrapolating from figures for the whole of Caithness and Sutherland that the majority of school leavers either go to University, further education or employment.

Given that there appear to be a number of adult training courses there is the need for a better assessment of the proportion of available adults taking advantage of such courses. There are clearly opportunities to train locally and there is support from CASE so there is the need to understand why the take-up may not be as high as it could be.

### ***Gaps***

Possible areas for further action could be:

Improving employment opportunities for both younger and older adults.

Better information and tracking of the uptake of adult training.

Initiatives to retain or attract back younger people (see also Objectives 5 and 11).

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## **Objective 8 Ensuring equal access to essential services**

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### ***Status***

With regard to essential services the data shows a mixed picture with some settlements having a reasonable spread whereas others particularly in the south-east lack services such as basic food shops and doctor's surgeries. There is only one High School in Bettyhill and there is a general lack of recreational facilities throughout the area.

Public transport is available throughout most of the area but the frequency of buses for example is limited for some communities. In other cases it may not be the frequency so much as the need to target transport on current need habits of the community.

The evidence confirms the concern expressed in the initial review over the availability of certain essential services and also over accessing these with effective public transport. (see also Objective 10 on access issues).

### ***Performance***

Highland Council is in the process of considering the implementation of public transport improvements in the pilot area under the Government's Rural Transport Initiative. This should tackle issues such as personalising services for the elderly and focusing transport on need.

Initiatives to improve transport services are also underway as part of the activities of the Social Inclusion Partnership.

### **Gaps**

Possible areas for further action are:

Bringing transport initiatives together into more of an integrated transport plan for the area.  
Ensuring that the initiatives to focus transport on local needs actually happen.  
Review the needs of remoter communities and prioritise the essential services that most need addressing ( eg food facilities and local markets, day care facilities, recreational needs and affordable housing).

## **GOAL 3 Reducing problems of remoteness by delivering local needs locally and reducing dependence on external inputs**

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### **Objective 9 Improving the local market for goods and services**

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#### **Status**

There was generally very little if any quantified information available on the degree to which local crofts or other producers (forestry, fisheries) were supplying produce locally.  
Neither was there information on local service provision or local markets and marketing opportunities.

#### **Performance**

There was evidence to suggest that recent new business startups focusing on local markets have been successful ( 4 on record).

There is generally insufficient information to set a baseline and assess the performance of the area in addressing the improvement of the market for local goods and services.

#### **Gaps**

Possible areas for further action could be:

- There is an urgent need to gather information and establish the extent of the local market for locally produced products and how well it is being targeted.
- There needs to be more of an emphasis on possible co-operative ventures, local markets and local distribution centres.
- There is scope for the community to set up a local transport role for servicing the local markets.

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## **Objective 10 Promoting equal and effective access to goods, services and markets**

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### ***Status***

Evidence from the available information indicates that fuel costs are disproportionately high for people living in the pilot area. Travel costs to the nearest major city are around six times that of people resident in the central belt of Scotland.

Data also indicates that there is a very large number of unclassified roads in the area.

Car ownership rates on the other hand are higher than for Scotland and almost the same as for Highland as a whole.

The data supports therefore the feeling of remoteness outlined in the initial review, confirms the higher travel costs and accentuates the transportation issues (see Objective 8).

### ***Performance***

This relates again to the need for an integrated transport plan and a coordinated effort to tackle the many transport related issues. There is a sustainability challenge posed here in so far as on the one hand we don't necessarily wish to promote the car and embark on major road building programmes and yet there is a clear need to tackle the "remoteness" factor and provide a more "level playing field" for the communities in this area (in terms of cost, road facilities etc).

### ***Gaps***

Possible areas for action could be:

- Prioritise certain critical roads for improvement.
- Progress the integrated transport initiative.
- Consider possible options for improving rail links.

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## **Objective 11 Providing an adequate information technology (IT) resource**

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### ***Status***

There was very little data with regard to IT facilities or usage for this pilot area. It is therefore difficult to gain any impression as to the development and usage of, for example community or business web sites. The IT resource will be an essential tool in the fight to retain or attract back younger people (see objectives 5 and 7)

**Performance**

There is a small IT/business centre in Bettyhill which offers IT and business related courses as an outreach centre of Thurso College. There are two other locations with internet connections Strathy and the Far Secondary School in Bettyhill that also partake in outreach IT courses.

**Gaps**

Possible areas for further action:

- There is an urgent need to increase awareness as to the availability and potential for IT for both community and business purposes.
- The use of IT could be a powerful tool to tackle some of the issues connected with the “remoteness” factor and in the battle to retain young people or attract back young returners (see Objectives 5 and 7).
- More publicity and use of the IT outreach facilities.

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**Objective 12 Reducing reliance on imports and subsidies**

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**Status/Performance**

Apart from an indication of the EU funding made available to the pilot area there was no information made available that could provide data on the levels of imported goods, services or skills. There was also no information available on the levels of public subsidy. In the absence of so much data it was also difficult to establish any realistic performance indicators on which to base the delivery of this objective.

The initial review noted the dependence of the pilot area on imports and cited this as a key issue that needed addressing

**Gaps**

Clearly this whole area needs a lot more work done on it. If the objective is to reduce the reliance on imports we need to establish:

- How are we going to measure it?
- How do we start to reduce it?

Progress with this objective ties in with Objective 9.

## **GOAL 4 Avoiding harmful effects on other people, places and future generations**

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### **Objective 13 Supporting the wise use of energy**

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#### ***Status/Performance***

Although there are currently no renewable energy projects in the pilot area a recent study by Scottish Hydroelectric indicates that wind power is the most promising and significant renewable energy source to pursue.

No detailed information is available on the percentage of power derived from renewable sources within the pilot area but on general data for Scotland given by Scottish Hydroelectric (the main provider in North Sutherland) it is likely to be around 10 – 15%.

In terms of energy efficiency within households the data indicates that there is generally a low awareness and activity in loft insulation and other efficiency measures.

#### ***Gaps***

Possible areas for future action could be:

- Consider a possible community/utility business joint venture to explore locally supplied renewable energy.
- Promote and raise awareness as to the simple energy efficiency measures that can be taken at home.

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### **Objective 14 Promoting waste minimisation and management**

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#### ***Status/performance***

The available information indicates that there are no waste minimisation schemes in North Sutherland and there do not appear to be any waste recycling centres.

The problems of waste management have clearly been recognised in the initial review and relate to issues such as fly tipping and litter.

#### ***Gaps***

Possible areas of action for the future:

- There is an urgent need to raise awareness on waste management and minimisation in order to start to address the problem.
- Although recycling may not be a viable option (although this needs confirming) it would be possible to set up initiatives such as segregation, composting and looking at reduction at source.

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## **Objective 15 Supporting “green” business and community initiatives**

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### ***Status/Performance***

The available data indicates generally little activity specifically on “green” product initiatives. With respect to the service sector the Tongue Youth Hostel appears to be the only tourism facility that has achieved the Green Tourism Business Award.

The initial review recognises the potential for developing niche “green” products when considering crofting developments and the sustainable use of other resources (see also Objective 3)

### ***Gaps***

Possible actions that could be taken in the future:

There is a lot of potential for exploring the development of “green” organic produce from the area (see Objective 3).

In view of the large number of hotels, guest houses and other tourism facilities there is plenty of scope for increasing the number of Green Tourism Business Scheme Awards (and possibly making North Sutherland a centre of excellence for “green” tourism – this could also be linked to Objective 1).

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## **Objective 16 Promoting co-operation with other communities**

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### ***Status/Performance***

There was no available data giving either the number of inter-community meetings or the number of inter-community initiatives. There was generally little information on any exchange visits or initiatives promoting the exchange of information.

### ***Gaps***

Possible areas where action could be taken:

Consider organising some local inter-community meetings to share ideas on sustainability challenges and opportunities as a way of “kick-starting” co-operation and collaboration. Use experiences within the Dùthchas project to launch collaborative initiatives.

### 3 PRIORITY ISSUES

From the preceding section a number of gaps in achieving the sustainability goals have been identified. This section highlights the key findings by dividing them into what might be considered “problem areas” or **sustainability challenges** and **sustainability opportunities**. They are grouped together with the principle findings from the initial review, where appropriate, which are shown in brackets in italics next to the corresponding finding from this study.

#### 3.1 PROBLEM AREAS – SUSTAINABILITY CHALLENGES

- **Goal 2** – Initiatives to encourage young returners (*Retaining young people*)
- **Goal 2** – Involving communities more in local planning process
- **Goal 2** – Improve employment opportunities for young and older adults (*Lack of employment*)
- **Goal 2** – Improve transport links/infrastructure through integrated transport plan and focus on local needs (*Transport links/infrastructure*)
- **Goal 3** – Address access to essential services in some localities (*Lack of recreational facilities*)
- **Goal 3** – Progress integrated transport initiative – road improvements/rail links? (*Transport links/costs/state of roads/infrastructure*)
- **Goal 3** – Establish indicators and performance measures to help reduce imports (*Dependence on imports*)

#### 3.2 SUSTAINABILITY OPPORTUNITIES

- **Goal 1** – Initiatives to promote further the unique natural environment in a sustainable way (*the scenery, beaches, hills and wild animals/birds are of major value – action holidays*)
- **Goal 1** – Explore scope for more heritage trails linked to historic sites and traditional arts and music (*Cultural resource development*)
- **Goal 1** – Consider the diversification of crofting particularly organic/“safe” products (*Diversification of crofting – safe/healthy/organic foods*)
- **Goal 3** – Establish local markets for local products and consider cooperative ventures (*Promoting local products*)
- **Goal 4** – Consider a project to explore renewable energy from wind power, possible joint venture with utility business?
- **Goal 4** – Raise awareness on waste minimisation and explore strategies to minimise waste
- **Goal 4** – Investigate potential for “green” products in general and promote more green tourism initiatives (*Promoting local products/action holidays*)

## 4 NORTH SUTHERLAND SUSTAINABILITY TOPICS

### 4.1 THE TOPICS

<i>From the Initial Review</i>	<i>From the Profile</i>
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<b>Goal 1: making the most of natural and cultural resources without damaging them</b>	
Scenery, beaches, hills, wildlife	<b><i>Natural environment</i></b>
<b><i>Cultural resource development</i></b>	<b><i>Heritage trails</i></b>
<b>Diversification of crofting – Safe/healthy/organic foods</b>	<b><i>Sustainable land use</i></b>

<b>Goal 2: Retaining a viable and empowered community</b>	
Retaining young people	<b><i>Young returners</i></b>
.....	<b><i>Local involvement with Planning</i></b>
<b><i>Transport links/infrastructure</i></b>	<b>Integrated transport Plan</b>

<b>Goal 3: Reducing problems of remoteness by delivering local needs locally, and reducing dependence on external inputs</b>	
Lack of recreational facilities	<b><i>Essential services</i></b>
<b><i>Dependence on imports</i></b>	<b>Reduce imports</b>
Promoting local products	<b>Local markets</b>

<b>Goal 4: Avoiding harmful effects on other people, places and future generations</b>	
.....	<b><i>Renewable energy</i></b>
.....	<b>Waste reduction</b>
<b>Promoting local products/ action holidays</b>	<b><i>“Green” business</i></b>

## 4.2 SUSTAINABILITY TOPICS – IDEAS FOR SHAPING TOPICS

### Key ideas originating from initial reviews and profiles

#### Goal 1 - Natural environment

- Increase areas of land under active habitat management
- Diversification where appropriate and encouraging more native woodland
- Local area biodiversity action plan
- Initiatives to promote in a sustainable way the unique natural environment
- “Green” tourism initiatives

#### Goal 1 - Heritage trails

- Collect/record information on cultural resources not fully recorded
- Scope for heritage trails and guides linked to sites/traditions undeveloped
- Major heritage theme trail

#### Goal 1 - Sustainable land use

- Organic crofting
- Sustainable non-agricultural activities
- Traditional crafts/links to tourism
- Forestry developments – native woodlands
- UK Woodland Assurance Scheme

#### Goal 2 - Young returners

- Initiatives to encourage young returners
- Training opportunities
- Availability of Information Technology (IT)
- Use of IT to maintain networks of school leavers

#### Goal 2 - Local involvement with planning

- Involvement with development control
- Input to transport planning
- Involvement with land use planning
- Involvement with community planning
- Crofting Township Grants

#### Goal 2 - Integrated transport plan

- Transport services
- Focusing on need
- Improving rail links
- Identifying ‘special’ transport needs (eg rounds for young people, elderly)

**Goal 3 - Essential services**

- Needs of remoter communities
- Recreational needs
- Food facilities (see also local markets)
- Day care
- Affordable housing

**Goal 3 - Reduce imports**

- Reducing reliance
- Establishing clear measures
- Status of imported goods, services, skills

**Goal 3 - Local markets**

- Establish size of market
- Co-operative ventures
- Local distribution
- Local service provision
- Resource availability

**Goal 4 - Renewable energy**

- Feasibility of wind power
- Joint venture with utility company
- Other alternatives

**Goal 4 - Waste reduction**

- Raising awareness
- Segregation, composting schemes
- Recovery, re-use, recycling options

**Goal 4 - "Green" business**

- Green Tourism Business Scheme
- Agricultural products
- Fishery products
- Forestry products

# **APPENDIX 3 : METHODOLOGY**

## 1 INTRODUCTION

This appendix which describes in broad outline the methods used in developing the Sustainability Profiles and supporting documents is divided into three main sections.

*Section 2* deals with how the guiding framework for the profiles was devised and discusses the terms used such as “Goal”, “Objective”, “Criteria” and “Indicators”.

*Section 3* goes on to describe the methods used for researching and collecting the data used.

*Section 4* describes how the “Gap Analysis” was carried out and a methodology for selecting priority topics for the Strategy Groups.

## 2 DEVELOPING THE FRAMEWORK

### 2.1 GOALS

The framework for the profiles was based on the Dùthchas definition of sustainability provided in the original brief for the programme of work. This definition was put together by the Dùthchas Project Team following the Initial Review work. It is based on concepts developed during the Initial Review and thus has a very local “feel” to it but at the same time there were great efforts to make sure that it “nests” well with existing national definitions.

The definition consists broadly of four key “goals”:

1. Making the most of natural and cultural resources without damaging them.
2. Retaining a viable and empowered community.
3. Reducing problems of remoteness by delivering local needs locally and reducing dependence on external inputs.
4. Avoiding harmful effects on other people, places and future generations.

### OBJECTIVES

Stemming from the Dùthchas Project vision, therefore, these goals provide the broad framework on which to structure the profiles. At this stage, however, they are still too broad for providing the more detailed framework that is necessary to give the profiles the detail they will need. The goals were therefore divided further into a series of underlying “objectives”. Four objectives were developed for each of the four goals giving 16 underlying objectives altogether. The objectives were selected from a consideration of the Initial Review findings, evaluations of objectives and criteria developed within previous studies done within the HIE Sustainable Development Project, consideration of a variety of sustainability reference documents and consultation with the Dùthchas Project Team and Partners.

The objectives are given in Figure 1.

**Figure 1. Objectives developed within the four sustainability goals**

**GOAL 1:** Making the most of natural and cultural resources without damaging them

**Objectives:**

- Protecting and enhancing natural resources and promoting their value
- Protecting and enhancing cultural resources and promoting their value
- Promoting the sustainable and innovative use of natural resources
- Promoting the sustainable and innovative use of cultural resources

**GOAL 2:** Retaining a viable and empowered community

**Objectives:**

- Retaining a balanced and healthy population
- Supporting community empowerment
- Ensuring equal access to employment
- Ensuring equal access to essential services

**GOAL 3:** Reducing problems of remoteness by delivering local needs locally and reducing dependence on external inputs

**Objectives:**

- Improving the local market for goods and services
- Promoting equal and effective access to goods, services and markets
- Providing an adequate information technology resource
- Reducing the reliance on imports and subsidies

**GOAL 4:** Avoiding harmful effects on other people , places and future generations

**Objectives:**

- Supporting the wise use of energy
- Promoting waste minimisation and management
- Supporting “green” business and community initiatives
- Promoting co-operation with other communities

## 2.2 INDICATORS

Having established the framework around the four key sustainability goals with their associated objectives there was a need now to establish the measures or indicators that would be used to judge:

- the position of the pilot areas in terms of their current state of “sustainability”;
- the current performance of the pilot areas in terms of delivering the four sustainability goals.

It was decided therefore that two types of measure or indicator would be needed:

- so-called “status” indicators that would act as a measure of the current state of the pilot area , as a “snapshot” in time and would act to establish a baseline situation;
- indicators that could be used as a measure of “performance” with particular reference to how well an area was delivering a particular objective within the four goals.

In practice a very large number of potential status and performance indicators were generated. These clearly needed to be refined down to a manageable number that could be used practically to generate profiles that would be meaningful, relatively simple, practical to use, but that could also be further refined and developed in the future as more information became available or was generated. The following set of criteria were used in the selection process for indicators:

- relevant data/information must be available;
- indicators needed to be truly “sustainable” where possible (*ie* should have a degree of integration to include an environmental, economic and social dimension if possible). In practice many of the status indicators tended to reflect one of the dimensions but these can be replaced by more appropriate indicators/measures where they exist and when the data becomes available;
- indicators need to be specific, measurable, trackable and easily understood.

The overall framework is illustrated in *Figure 2*.

## 3 RESEARCHING METHODS

For each of the 16 objectives a step by step process was used to research out and compile the information needed to build up the profiles.

### **STEP 1 SCOPING THE OBJECTIVE**

- Identify the obvious parameters linked with the selected Objective – using Objective 1 as an example:

Objective 1 - “*Protecting and enhancing natural resources and promoting their value.*”

Key topics to consider: **Status:** sea, fresh water, land, air, biodiversity, habitat, landscape

**Performance:** management, stewardship, use, presentation.

- Identify measures/indicators linked to these parameters

Objective 1 – ‘*Status indicators*’ measure the current status of a given area in relation to “protecting and enhancing natural resources and promoting their value”;

**Examples** : coastal water quality, river water quality, air quality, percentage of nationally important habitat types.

Objective 1 – ‘*Performance indicators*’ measure the performance of a given area in relation to “protecting and enhancing natural resources and promoting their value”;

**Examples:** interpretative facilities relating to conservation/environment (number, success and quality of the facility, quality of promotional material, trends in visitor numbers), the amount of land under habitat management.

## **STEP 2 SOURCING THE DATA/INFORMATION**

- Identify data sources from which information can be sought. These may include the main regulatory bodies or local authorities (such as SEPA, SNH, Highland Council), public agencies (such as HIE, the Local Enterprise Companies), agencies such as the Crofters Commission and the Tourist Boards, local communities ( such as community councils) and from local people and local knowledge.

### *Task 1* Contact chosen source (telephone)

- introduce yourself, the project, and the area for which you are seeking information
- discuss the indicators/measures selected and determine whether additional or more appropriate indicators/measures may be available
- confirm this source can best provide the necessary data, if not, request suggestions regarding more appropriate data sources
- request relevant information and indicate a time-scale.

### *Task 2* Follow-up your initial request in writing (e-mail, fax, letter)

- re-iterate who you are and the project/ area for which information is being sought.
- define the boundaries of the area/ indicator for which you are seeking information
- clearly and concisely re-state your request ( what piece of information you are seeking)
- re-state the time frame you are working within and assert a date by which information must be received (or negotiate a compromise date if necessary)
- provide the source with address / fax number / e-mail address to which information must be sent
- Follow-up written request with phone calls, when necessary (to ensure request is being fulfilled)
- Receive information
- Contact source and confirm information has been received. Thank source for their help.

### **STEP 3 INCORPORATING THE INFORMATION**

Having received the information it will have arrived in a fairly “raw” state and will need to be incorporated into the profile in a form that is clear, succinct, understandable and relevant to either the status indicator or measure of performance that is being developed.

Ideally numeric data is best incorporated into a graph, chart or figure which in time can be updated to illustrate trends in the particular measure that is being considered.

In some cases where data collection is at an early stage there may be no alternative but to provide descriptive summaries of the information, until “harder” more statistically valid data has been collected. Trend analysis will only be possible with data that has been collected over a number of years.

## **4 GAP ANALYSIS METHODS**

### **4.1 ASSESSING THE GAPS**

The gap analysis was essentially a qualitative assessment of the extent to which each of the pilot areas was delivering the 16 objectives which underlie the 4 sustainability goals. This was carried out in 3 simple stages:

#### *STAGE 1 Describing the current status*

Here under each of the main objective headings the current status was briefly evaluated and summarised and referenced back to the findings in the Initial Review.

#### *STAGE 2 Assessing the current performance*

Here with reference to the measures or indicators selected for assessing performance a qualitative assessment of performance in achieving the objective was made.

#### *STAGE 3 Identifying the gaps*

Here in view of achievements made in performance and with reference to some of the more “sustainable” indicators, judgements were made as to where the key gaps for more effective delivery of the objectives might be and of what actions should be taken to accelerate the move towards sustainability.

### **4.2 IDENTIFYING PRIORITY TOPICS**

Having identified where some of the key gaps were in achieving the objectives, the next stage was to prioritise these into a more manageable number that could be used as a basis for selecting topics for the Strategy Groups to focus on.

In practice for each of the pilot areas around forty gaps or topic areas were identified in the gap analysis studies. It was decided that these should be reduced to around a dozen topic headings to facilitate the PAAGS in ultimately carrying forward around five topics for the Strategy Groups to work on.

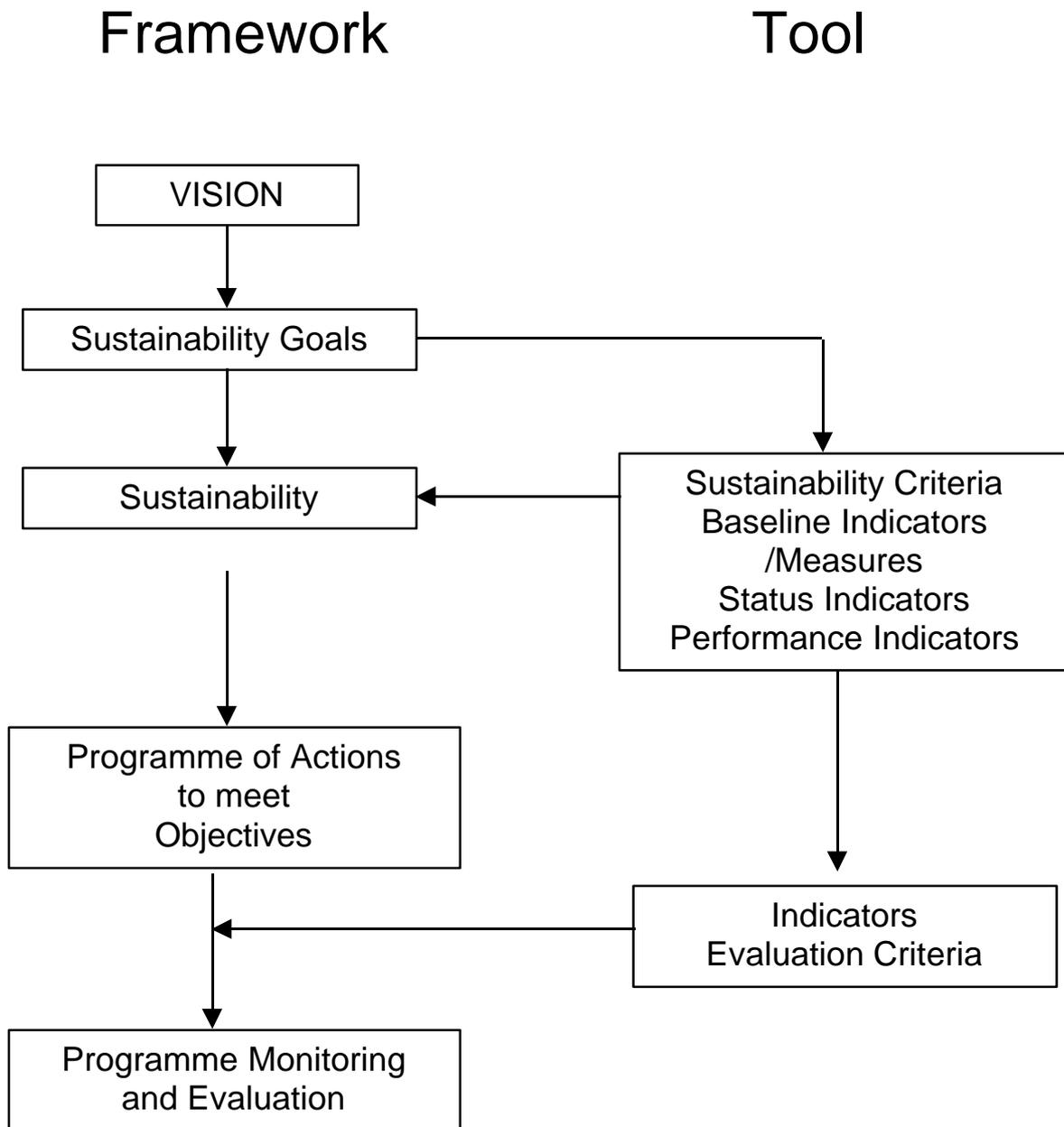
A crude scoring method was devised to help prioritise the topics. The forty topics suggested by the gap analysis were each scored for the following:

- did they offer an environmental benefit;
- did they offer an economic benefit;
- did they offer a social benefit;
- had they been highlighted in the Initial Review.

Each was given a point if they scored in any of the categories and the topics with the highest scores were the ones selected. There had to be a reasonably equal spread of topics within the 4 main sustainability goals.

In practice many of the topics for the Strategy Groups to work on were still reasonably broad ranging so to accompany the table of recommended topics a number of additional aspects that might help to shape the topic were included.

**Fig. 2 Dùthchas Framework for Sustainability**



# **APPENDIX 4 : BIBLIOGRAPHY**

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**APPENDIX 5 :  
ORGANISATIONS AND INDIVIDUALS  
CONTACTED  
AUGUST 1999 – NOVEMBER 1999**

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## HIGHLAND COUNCIL

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Protective Services – Liz Mackay

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Head of Waste Strategy – Henderson Pollock

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## HIGHLANDS AND ISLANDS ENTERPRISE

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## CAITHNESS AND SUTHERLAND ENTERPRISE

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## BUSINESS INFORMATION SOURCE

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## **SCOTTISH TOURIST BOARD**

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## **HIGHLANDS OF SCOTLAND TOURIST BOARD**

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---

## **SUTHERLAND PARTNERSHIP**

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**WEST SUTHERLAND FISHERIES TRUST**

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**BETTYHILL, STRATHNAVER AND ALTNAHARRA COMMUNITY COUNCIL**

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# **APPENDIX 6 : PROPOSED INDICATORS**

The following table documents all proposed indicators recorded during consultation exercises relating to the Area Sustainability Profiles. The indicators highlighted in bold italics were included in the Profiles (in varying formats).

## Objective 1

Protecting and enhancing natural resources and promoting their value

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
PAC Skye		<ul style="list-style-type: none"> <li>• Level of community awareness and pride</li> <li>• Number of school initiatives on the local environment</li> <li>• Wildlife diversity</li> <li>• Infrastructure relating to landscape and coastal use</li> <li>• Level of investment in marketing</li> </ul>
Forestry Commission	<ul style="list-style-type: none"> <li>• Condition of woodland through sound management</li> </ul>	<ul style="list-style-type: none"> <li>• Number, area, % woods coming into active management</li> </ul>
SEPA		<ul style="list-style-type: none"> <li>• <b><i>Numbers served by biological or better treatment/ septic tank/ no treatment</i></b></li> <li>• <b><i>SEPA's River Classification Scheme</i></b></li> </ul>
Scottish Tourist Board		<ul style="list-style-type: none"> <li>• <b><i>Quality of interpretative facilities</i></b></li> <li>• <b><i>Number of repeat visitors to interpretative facilities/ level of consumer satisfaction</i></b></li> <li>• <b><i>Intensity of use of site/ any level of perceived stress</i></b></li> </ul>
Scottish Natural Heritage	<ul style="list-style-type: none"> <li>• Drinking water quality</li> <li>• Standing water quality</li> <li>• <b><i>Breeding bird population</i></b></li> <li>• Quality of uplands habitat in Trotternish</li> <li>• Quality of species rich grasslands in Trotternish</li> <li>• Relationship between area of quality habitats/ landscapes worthy of designation and the total area</li> </ul>	<ul style="list-style-type: none"> <li>• Income from environmental management payments (total value)</li> <li>• <b><i>Success and quality of interpretative facilities</i></b></li> </ul>

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
	<ul style="list-style-type: none"> <li>• % of native woodland cover in relation to previous cover/ predicted cover/ land capability</li> </ul>	
Scottish Native Woods	<ul style="list-style-type: none"> <li>• <b>% native woodland cover and condition</b></li> </ul>	
RSPB Sutherland	<ul style="list-style-type: none"> <li>• <b>Air quality</b></li> <li>• Soil quality</li> <li>• <b>Water quality</b></li> <li>• Habitat condition - % of designated land in favourable condition and condition of land outwith protected areas —is it sustainably managed?</li> <li>• <b>Biodiversity – performance of key species/ number of species increasing/ decreasing</b></li> <li>• Quality of promotional material</li> <li>• <b>Quality of visitor infrastructure (all aspects)</b></li> </ul>	<ul style="list-style-type: none"> <li>• Air quality – is the air getting cleaner</li> <li>• Water – free of sewage/ other pollutants</li> <li>• Key species – not declining in numbers or contracting in range</li> <li>• Designated areas in favourable condition</li> <li>• <b>Habitat management and habitat restoration projects</b></li> <li>• Damaged habitat returned to favourable condition</li> <li>• Number of crofters/ farmers managing land under agri-environment schemes (e.g. Rural Stewardship Scheme, Peatland Management Scheme)</li> <li>• Total area of land managed under these sort of schemes</li> <li>• Uptake of any species work proposed in a Local Biodiversity Action Plan</li> <li>• <b>Uptake of any individual Species/ Habitat Action Plans</b></li> <li>• Visitor numbers increasing without damage to infrastructure/ natural heritage</li> <li>• Number of visitors who cite natural/ cultural heritage and environment for visiting the area</li> </ul> <p>Focus attention on:</p> <ul style="list-style-type: none"> <li>• Suitability of the area to support visitors</li> <li>• Impact of visitor facilities</li> <li>• Impact of visitors on quality of experience/ lives of local people/ natural heritage</li> <li>• Value of tourism to the local economy</li> </ul>
Highland Council	<ul style="list-style-type: none"> <li>• <b>Number of interpretative facilities/ provisions</b></li> </ul>	
The Wildlife Trust		<ul style="list-style-type: none"> <li>• <b>% increase in native woodland cover</b></li> </ul>

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
		<ul style="list-style-type: none"> <li>Expansion of key woodland types identified within Habitat Action Plans</li> </ul>

## Objective 2

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Protecting and enhancing cultural resources and promoting their value

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
PAC Skye	<ul style="list-style-type: none"> <li><b>Number of recorded sites and monuments</b></li> <li><b>Presence of indigenous community and/ or tradition bearers</b></li> <li><b>Number of interpreted sites and number not yet interpreted</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Number of Gaelic related initiatives (e.g. the croileagain, feisean, Gaelic learners' opportunities)</b></li> <li><b>Number of people who speak Gaelic to a near fluency level</b></li> <li><b>Number of projects in community ownership</b></li> <li>Level of archaeological investigation (excavation, field survey etc.)</li> <li>Level of investment in marketing</li> </ul>
Forestry Commission		<ul style="list-style-type: none"> <li><b>Number of Gaelic related initiatives including Government, agency and NGO publications in bi-lingual format</b></li> </ul>
Scottish Tourist Board	<ul style="list-style-type: none"> <li>% of accommodation sector which is locally owned/ independent</li> <li>% of which has membership of local Area Tourist Board</li> </ul>	
NTS Society of Antiquities	<ul style="list-style-type: none"> <li><b>Number of 'nationally important' monuments</b></li> </ul>	
Historic Scotland	<ul style="list-style-type: none"> <li><b>Total number of Scheduled Ancient Monuments plus those monuments listed on a non-statutory register awaiting consideration for scheduling</b></li> <li>Extent of deterioration of Scheduled Ancient</li> </ul>	

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
	Monuments over (recent) time <ul style="list-style-type: none"> <li>• The number of sites which are of cultural/ social/ historical significance to the community, despite national criteria (measure local vs national perspective)</li> <li>• The number of accessible sites which are of cultural/ social/ historical significance</li> </ul>	
Highland Council	<ul style="list-style-type: none"> <li>• <b>Number of interpretative facilities/ provisions</b></li> </ul>	
Sabhal mor Ostaig	<ul style="list-style-type: none"> <li>• <b>Breadth of opportunity for use/ hearing of Gaelic</b></li> </ul>	

### Objective 3

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Promoting sustainable and innovative use of natural resources

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
PAC Skye	<ul style="list-style-type: none"> <li>• Tonnage of prawns</li> <li>• Tonnage of velvet and brown crabs</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Uptake of young crofters to new entrant's scheme</b></li> <li>• Number of crofters entering the Countryside Premium Scheme</li> <li>• Area of land under community ownership</li> </ul>
Scottish Natural Heritage	<ul style="list-style-type: none"> <li>• Fuel consumption per head for transport/ heating etc</li> <li>• Ranger services</li> <li>• LA21 groups</li> <li>• Time spent on environmental education within schools</li> </ul>	
RSPB Sutherland	<ul style="list-style-type: none"> <li>• Use of water – how much? For what?</li> </ul> Agriculture:	Agriculture: <ul style="list-style-type: none"> <li>• Use of pesticides</li> <li>• Use of inorganic/ organic fertilisers</li> </ul>

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
	<ul style="list-style-type: none"> <li>• Loss of habitat to farming/ forestry – how much have we got? How fast is it going?</li> <li>• Is current agriculture sustainable (intensification etc)</li> <li>• Crofting – number of sheep/ number of cattle/ are of in-bye managed/ area of hay grown/ area of root crops grown/ number of Common Grazings in machinery rings, in agri-environment schemes/ <b>number of crofts occupied/ number of crofters actively managing the land (e.g doing some of the above)</b></li> </ul> <p><b>Fisheries:</b></p> <ul style="list-style-type: none"> <li>• Impact of hunting/ fishing on wild population</li> <li>• Coastal fisheries – number of boats/ number of fishermen/ number of lobster/crab landed/ number of shellfish farms</li> <li>• Impact of sea fishing on wild fish populations</li> <li>• Freshwater fisheries – river catches of Salmon and Sea Trout/ loch catches of Brown Trout (number of rod days/ number of fish caught/ size and age class)/ predator control – number of Cormorants, Red-breasted Mergansers and Goosanders shot</li> </ul> <ul style="list-style-type: none"> <li>• <b>Game – annual cull figures for Red Deer/ Deer numbers (estimates)</b></li> </ul> <p>Forestry:</p> <ul style="list-style-type: none"> <li>• Number of people/ communities involved in managing woodland</li> <li>• Use/ management of existing woodland</li> </ul>	<ul style="list-style-type: none"> <li>• Waste management on farms</li> <li>• <b>Number of sheep/ cattle (stocking densities)</b></li> <li>• Crop selection</li> <li>• Management practices on farms</li> <li>• <b>Dependence on agricultural support mechanisms</b></li> <li>• Agri-environment alternatives</li> <li>• Value of crofting/ farming to local economy</li> <li>• <b>Organic farming</b> - level of subsidy available to organic producers/ proportion of consumers buying organic</li> <li>• <b>Stocking densities</b> – condition of habitat to determine if it is over grazed or undergrazed/ <b>index of grazing pressure</b></li> </ul> <p>Forestry: How is timber crop performing? Added/ local value/ benefits to environment</p> <ul style="list-style-type: none"> <li>• Habitat loss to forestry</li> <li>• Balance of native vs non-native planting – changes</li> <li>• Use of pesticides – increasing/ decreasing</li> <li>• Use of fertilisers</li> <li>• <b>Forest management</b> (roads, fences, drainage)</li> <li>• Value of forestry to local economy</li> </ul> <p>Fishing: Is current level sustainable? Is fishing impacting on fish populations/ natural heritage?</p> <ul style="list-style-type: none"> <li>• Impact of fishing on wild fish populations – how are they performing?</li> <li>• Impact on fishery management on wild populations</li> <li>• Value of fishing to local economy – increase/ decrease</li> </ul>

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
	<ul style="list-style-type: none"> <li>• Number of forestry related jobs (planting, woodland management, extraction/ timber processing)</li> <li>• Minerals – peat (e.g. number of people cutting peat at a parish or grazings level)</li> </ul>	<p>Fin-fish farming: Is current level sustainable? Fresh and marine management practices</p> <ul style="list-style-type: none"> <li>• Use of chemicals/ feed etc</li> <li>• Impact of escapees</li> <li>• Impact of management on safety/ quality of product</li> <li>• Value to local economy</li> </ul> <p>Shell-fish farming:</p> <ul style="list-style-type: none"> <li>• Management practices</li> <li>• Impact on landscape/ wildlife</li> <li>• Value of shell-fish to local economy</li> </ul> <ul style="list-style-type: none"> <li>• <b>Availability of resources to set up “green” projects/ number of applications made/ proportion of successful applications</b></li> <li>• <b>Number of local initiatives which are using local natural products (e.g. dairy, honey, fish, shellfish, game, lamb, beef, wool, wood etc)</b></li> </ul>
The Wildlife Trust		<ul style="list-style-type: none"> <li>• <b>Index of grazing/ browsing</b></li> <li>• Number of deer per 100ha</li> <li>• <b>Density of sheep/ cattle within a given area</b></li> </ul>
Forest Enterprise		<ul style="list-style-type: none"> <li>• <b>Grazing pressure indicator</b></li> <li>• Number of grant aided woodland schemes</li> <li>• <b>Number of certifications under the UK Woodland Assurance Scheme</b></li> </ul>
Sabhal Mor Ostaig	<ul style="list-style-type: none"> <li>• Area of land/ number of crofters producing crops/ number of cattle</li> </ul>	

## Objective 4

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Promoting sustainable and wise use of cultural resources

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
PAC Skye	<ul style="list-style-type: none"> <li>Percentage of schools offering Gaelic medium education</li> <li>Number of active musicians and artists in the community</li> </ul>	<ul style="list-style-type: none"> <li><b>Number of events which have a distinctive flavour</b></li> <li>Number of people who are computer literate</li> <li>Number of specialist/ distinctive tourism opportunities (e.g. real experiences - such as activity holidays, learning step dancing, Gaelic, fishing etc.)</li> <li>Level of Gaelic use as a marketing tool</li> <li>Use of Gaelic in software packages, and also level of software which acknowledges Scottish surnames and place names</li> <li>Number of products which have emanated from the locality</li> </ul>
Forestry Commission		<ul style="list-style-type: none"> <li>Number of active/ specialist broadcasts/ + articles in the press</li> </ul>
Scottish Museums Council		<ul style="list-style-type: none"> <li>Level of volunteers/ community members involved in individual cultural projects</li> </ul>
Historic Scotland	<ul style="list-style-type: none"> <li><b>Proportion of historic sites/ monuments actively managed to the benefit of the sites/ monuments</b></li> </ul>	<ul style="list-style-type: none"> <li>Use of cultural resources by schools/ students</li> </ul>
NTS Society of Antiquities		<ul style="list-style-type: none"> <li><b>Adaptive re-use of cultural resources</b></li> <li>Number of sites/ monuments compromised or damaged</li> </ul>

## Objective 5

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Retaining a balanced and healthy population

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
PAC Uist	<ul style="list-style-type: none"> <li><i>% elderly cared for by/ in the community</i></li> </ul>	
PAC Skye		<ul style="list-style-type: none"> <li><i>Resources available to distance learners</i></li> <li>Number of community-led classes relating to <i>health</i></li> </ul>
Forestry Commission	<ul style="list-style-type: none"> <li><i>% breeding females</i></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
Scottish Homes		<ul style="list-style-type: none"> <li><i>% change in total population – both population size and age distribution</i></li> <li><i>% change in population of working age (16-65)</i></li> </ul>

## Objective 6

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Supporting community empowerment

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
PAC Skye	<ul style="list-style-type: none"> <li>Level of resources in community ownership (forests, lochs, minerals etc)</li> </ul>	<ul style="list-style-type: none"> <li><i>Number and amount of LEC provided Community Action Grants</i></li> <li>Relationship between community groups</li> </ul>
PAC North Sutherland	<ul style="list-style-type: none"> <li>Proportion of local people employed by agencies/ decision-making bodies to work in the area. And proportion of workers “imported”</li> <li>Number of business start-ups with agency support; quantity of this support; associated benefits</li> </ul>	<ul style="list-style-type: none"> <li>Proportion of ideas that come out of the community for their own development and how many of these are fulfilled</li> <li>Extent to which the community members volunteer time/ donate money to local causes</li> <li>Local response to external pressure e.g land designations, superquarry</li> <li>How much of the money being spent on environmental</li> </ul>

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
		measures directly benefits the community, and how much goes to absentee landowners <ul style="list-style-type: none"> <li>Level of community influence on land use management</li> </ul>
Forestry Commission		<ul style="list-style-type: none"> <li><b>Number of societies, clubs etc</b></li> </ul>
Highland Council	<ul style="list-style-type: none"> <li>Number of landowners within each Pilot Area</li> <li>Average land tenure</li> <li>Number of land holdings below a certain size</li> </ul>	<ul style="list-style-type: none"> <li>Number of articles in local press relating to community projects and local involvement</li> </ul>
Sabhal Mor Ostaig	<ul style="list-style-type: none"> <li><b>Amount of activity within Grazings Committees (meetings)</b></li> </ul>	
Scottish Homes		<ul style="list-style-type: none"> <li><b>Number of communities taking part in community planning process</b></li> </ul>

## Objective 7

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Ensuring equal access to employment

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
PAC Skye	<ul style="list-style-type: none"> <li><b>Number of educational establishments</b></li> </ul>	<ul style="list-style-type: none"> <li><b>% of school leavers going to university and/or further education</b></li> <li>Level of school rolls</li> <li><b>% of workers whose place of work is in the locality in question</b></li> </ul>
Highland Council		<ul style="list-style-type: none"> <li><b>Grants allocated for business start-up</b></li> </ul>
Scottish Homes		<ul style="list-style-type: none"> <li><b>% of pupils going on to something other than unemployment</b></li> <li><b>% of employees in Investors In People (IIP) organisations</b></li> <li><b>% employment in tourism and primary sectors</b></li> </ul>

## Objective 8

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Ensuring equal access to essential services

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
PAC Skye	<ul style="list-style-type: none"> <li>• Frequency of health services including clinics</li> <li>• Level of accessibility for disabled and adherence towards social inclusion</li> </ul>	
Highland Council		<ul style="list-style-type: none"> <li>• <b><i>Absolute number of elderly people requiring residential care who are not cared for within their local community</i></b></li> </ul>
Scottish Homes		<ul style="list-style-type: none"> <li>• Levels of BTS properties in the area</li> <li>• Tenure of properties</li> <li>• Number of empty/ second/ holiday homes in the area</li> <li>• <b><i>Rental levels</i></b></li> <li>• Number of homeless/ hidden homeless</li> <li>• Waiting list information</li> <li>• <b><i>Accessibility - % population within 10 minute drive time from 5 key services (GP/ petrol/ Post Office/ food shop/ primary school)</i></b></li> </ul>

## Objective 9

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Improving the local market for goods and services

## Objective 10

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Promoting equal and effective access to goods, services and markets

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
PAC Skye	<ul style="list-style-type: none"> <li><i>links between public services</i></li> </ul>	

## Objective 11

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Providing an adequate IT resource

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
PAC Skye	<ul style="list-style-type: none"> <li><i>Number of courses available to resident population</i></li> <li><i>Public awareness of the availability of IT training</i></li> </ul>	
Highland Council		<ul style="list-style-type: none"> <li><i>Provision of IT training requested - provided</i></li> </ul>

## Objective 12

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Reducing reliance on imports and subsidies

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
PAC Skye		<ul style="list-style-type: none"> <li>Number of crofters involved in research projects for diversification</li> </ul>
Scottish Homes		<ul style="list-style-type: none"> <li><i>Level of external subsidies (reduction can indicate vulnerability)</i></li> </ul>
Scottish Ornithologist Club		<ul style="list-style-type: none"> <li><i>Number of crofters taking up environmental subsidies</i></li> </ul>

## Objective 13

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Supporting the wise use of energy

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
Forestry Commission		<ul style="list-style-type: none"> <li>• <i>Number of woodlands achieving UK Woodland Assurance Scheme certification</i></li> </ul>

## Objective 14

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Promoting waste minimisation and management

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
SEPA	<ul style="list-style-type: none"> <li>• Quantity of material recycled compared to waste disposed of in the area/ elsewhere</li> </ul>	<ul style="list-style-type: none"> <li>• <i>% waste recycled</i></li> <li>• <i>Number of successful waste minimisation initiatives (vs those promoted by Councils which may include unsuccessful ones)</i></li> <li>• <i>Amount and type of waste recycled</i></li> </ul>
Scottish Natural Heritage	<ul style="list-style-type: none"> <li>• Number of landfill sites</li> <li>• Waste tonnage per head</li> </ul>	
Highland Council		<ul style="list-style-type: none"> <li>• Total number of waste minimisation schemes</li> <li>• Tonnage of domestic waste put to landfill</li> </ul>

## Objective 15

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Supporting 'green' business and community initiatives

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
Highland Council	<ul style="list-style-type: none"> <li>Number of businesses with ISO 9000 certification</li> <li>Number of businesses with ISO 14001 certification</li> </ul>	

## Objective 16

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Promoting co-operation with other communities

Organisation	Proposed Condition Indicators	Proposed Performance Indicators
Highland Council		<ul style="list-style-type: none"> <li><b><i>Number of study visits and conferences attended</i></b></li> </ul>
Historic Scotland	<ul style="list-style-type: none"> <li>The number of positive initiatives as a ratio to the number of meetings</li> <li>Number of person-hours spent in <b><i>inter-community meetings</i></b></li> </ul>	