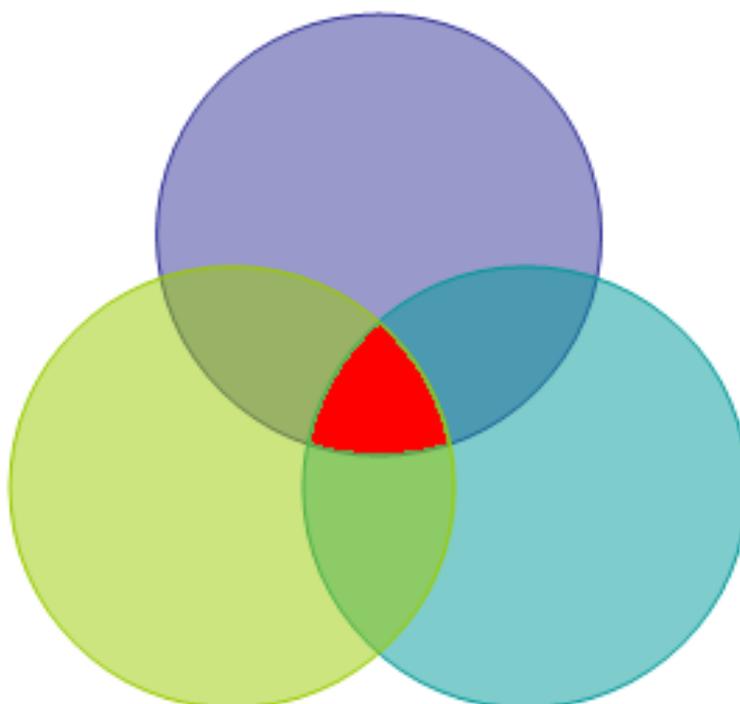


NEED - Project

WP5 Rising awareness and skills of tourists and locals
Action 26

Report of

***MODELS
FOR ORGANISING BUSINESS ORIENTED SERVICES
FOR ENVIRONMENTAL EDUCATION***



NEED WP 5 Action 26

Models for organising business oriented services for environmental education

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1. Introduction

- Public schools are losing contacts to the real environment and the values of real nature and cultural heritage
- Thematic tours are increasing in the demand of common and expert tourism; geological information creates interesting content to some destinations like Unesco's WH natural heritage (geoheritage) sites and European Geoparks.
- The geological tourism and educational tourism are rising as a customer segments due to
 - more educated people travel more with cheaper flights on their own schedule and travel programmes, also
 - the study tours for schools on 1st and 2nd level are increasing,
 - the segment of seniors, who are travelling in groups seek more info on their tours, also
 - the increasing volume of conferences including pre- and post conference excursions
- The New Tourist profile
 - better educated
 - more concerned about the environment and culture
 - more curious and academically-minded
 - often engaged in a personal search
 - an active participant in the tour
- Geotourism is defined as a form of natural area tourism that specifically focuses on landscape and geology. It promotes tourism to geosites and the conservation of

geo-diversity and an understanding of Earth sciences through appreciation and learning. This is achieved through independent visits to geological features, use of geo-trails and view points, guided tours, geo-activities and patronage of geosite visitor centers. (Newsome & Dowling 2010).

- By definition, EduTourism is travel for the purpose of formal or informal education and life long learning in unique natural, historical & multi-cultural environments. It refers to any tourism program or product offering in which participants travel to a location with the primary purpose of engaging in a learning experience.
- EduTourism; the marketing and sale of a product or service which main purpose is to disseminate knowledge, in one form or another.
 - benefits the local economy and enhances the general population at the same time as educating and enriching the lives of the individuals who participate in these programs.
 - Attracts a wide base of consumers who are less satisfied with 'package' vacations
 - Has the potential to create a socially and economically sustainable tourism product that benefits both the region and its visitors.
 - Can help rejuvenate tourism throughout the world, celebrating cultures and the intermingling of residents and visitors.
 - It can provide great support for preservation and conservation of the local environment and culture and provide more meaningful opportunities for residents and visitors.
 - One of the most obvious benefits of EduTourism is the sustainability aspect of it in that the local population is being more actively involved in the direct and indirect benefits of tourism.
 - Involves the collection of knowledge, both local and specialized, from which a well defined product is created, which is then developed and marketed.
 - Educational tourism always involves an intimate connection between the mentor/guide and a relatively small group of customers.
 - Within EduTourism there are main sub-fields, e.g. concerning geology, nature, health, etc.
- The curriculum of the schools activates the teachers to use the near-by nature for education, but the budget resources do not always contribute the activation of that option
- High variation between teachers, schools and countries in extra-mural education as a learning and teaching method; where more actions in environmental education, there better results in learning (case Finland/Pisa report).
- New business opportunities are opening in the education part and in the supportive part of the edu-tour operations; how large segment, volume of the edu.-tours today, what kind of capacities and resources are needed to best practise edu-tour service? Responsibilities of the teacher, schools, parents and the businesses, costs of one edu-tour per a pupil, per all the pupils in edu-tour program per year, turnover in businesses
- schools are using edu-programmes during the low tourism seasons
- NEED project analyses; How the geo-edu -tours for schools have been organised in each NEED partner communities; strong points and weaknesses, organisation details in integration of education, community and business.

- Classifying environmental edu-tour models for schools in **3 categories**;
 - **1. Environmental Lesson:** near-by environment of the school, 1-2 hours learning programme
 - **2. Nature School:** near-by nature site of school; 0,5-1 day learning programme
 - **3. Camp school:** nature site far from the school; 1-5 overnights, 1-5 days learning programme as edu-tourism
- Secondary target is that Category 2 and 3 models can be used also for the guided tour groups and other study programmes, not only for the schools
- NEED project analysing models in categories 2 and 3.



Figure 1.1 The basic stakeholders recognised for the geo-edu service development.

The basic stakeholders for the developing and delivering a geo-edu product are rather multiple. Development project integrates at least the following stakeholders:

- governmental organisations which steer and fund the operational educational organisations
- governmental geo-research organisations which are interested to popularise the scientific knowledge for public benefit
- Regions who are interested about the sustainable regional development
- Municipalities, who are interested about organising and funding the education in their schools

- Schools who are interested about the education curriculum and the learning results with budget resources
- Academic research and education centres, who are interested about learning methods and development oriented innovations and studies
- National parks and other natural heritage sites and with them integrated visitor centres, who are interested about sustainable and adaptive management of their resources for the benefit of the nature and visitors
- Tourism SMEs, who are interested about developing their skills in the geo-edu tourism services to gain more customers and earn their living
- NGOs who are interested to join to the geo-edu development process on voluntary basis to steer the development on the direction they prioritise

The possible actors and the key actor may rise in different combinations within this set of stakeholders. The challenge is how to organise the common interests of the stakeholders in any given situation so that an effective and sustainable service model can be created in relevant learning environment for geo-education services for the priority target groups. The case studies will focus more detailed in the following questions:

- combination of actors
- description of product service
- function in reality
- what could be made better
- new ideas for value added

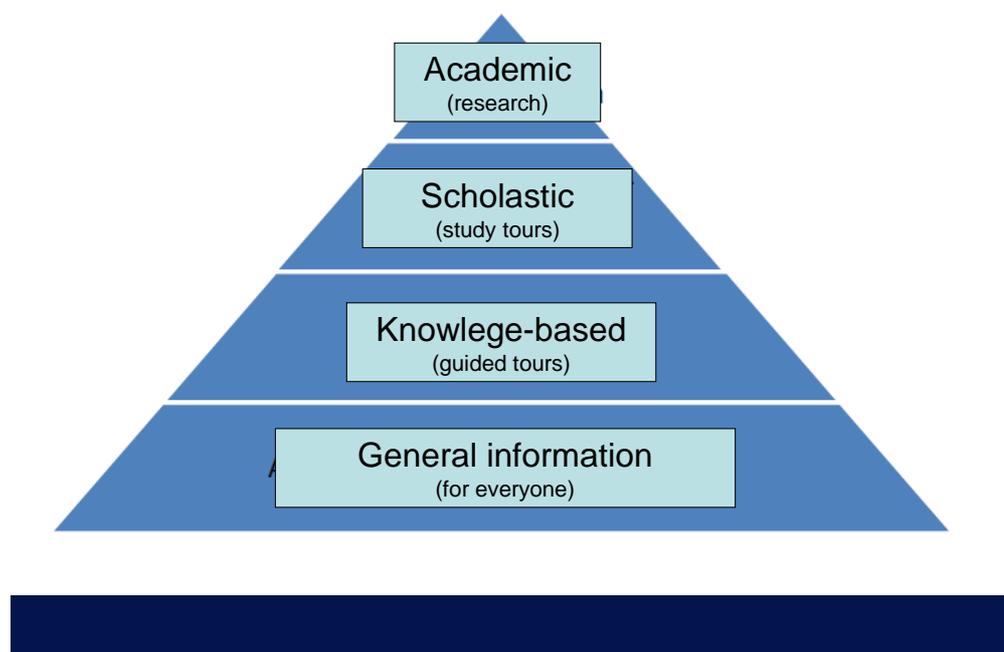


Figure 1.2. The hierarchy of the educational geo-tourism products according to the level and quality of information.

NEED –project is focusing mainly on the Scholastic study tours and Knowledge based guided tours as geo-edu products. The target groups in NEED –project are the schools

(teachers and the classes) with different age classes. The education modules and learning environments can be used also for the benefit of the guided tours for the visiting general tourist groups.

Framework for sustainable regional development

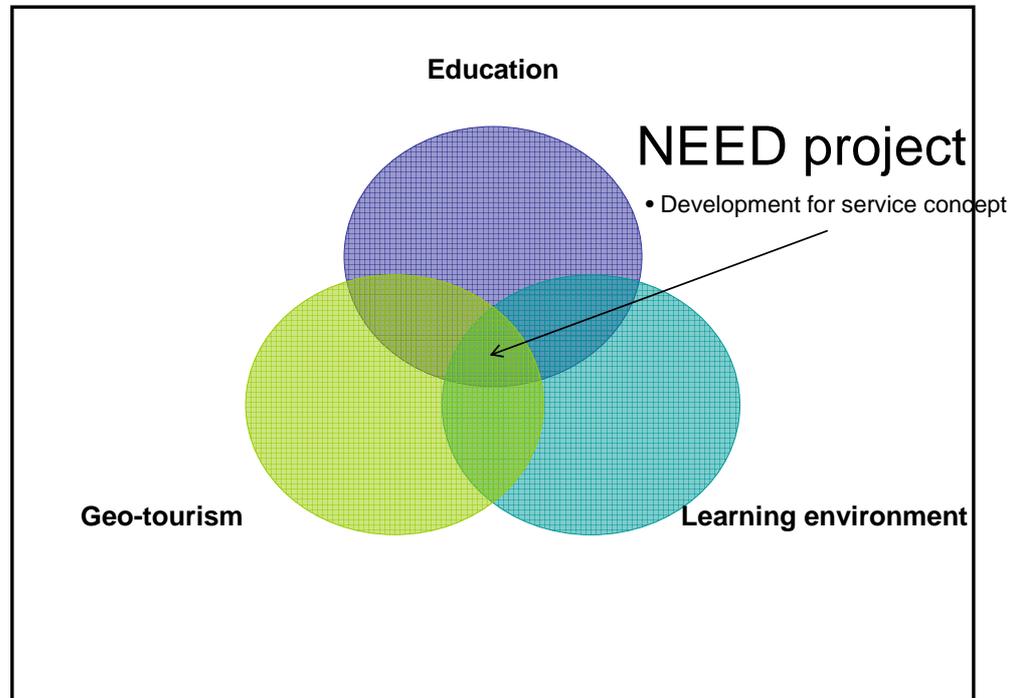


Figure 1.3. Framework for sustainable regional development for geo-edu tourism.

The task for the NEED -project is to develop the service concept for category 2 and 3 geo-edu services so that the educational and geo-tourism needs can be met in the favourable learning environments in an effective and in some cases business oriented way. There the case studies on national and regional level are collected and analysed. In the synthesis the target is to make recommendations about the key principles, criteria and effective organisations for the future geo-edu services in NPP working area.

2. Analysis of Environmental education organisations in NEED partners communities

In NEED project four countries including 7 different learning environments have each an site- and community specific models for edu-tour management. Here we introduce the organisations and the key factors for they success or problems to produce the results and outputs they are designed for.

2.1 Finland

In Finnish NEED national project there are 4 learning environments under development. Each of them are different from each other in the context of the edu-service organisation.

Suomen Kivikeskus – Finnish Stone Centre (FSC)

Finnish Stone Centre (FSC) is a multi-functional geo-oriented service centre in the Eastern Finland, Near by Koli National Park. It's strategic service plan is integrated with that of Koli National Park and Koli Resort around it. Annually FSC serves 10 000-28000 customers, who buy the ticket to the exhibitions, most of them are passing tourists. The number of all non-paying and paying annual customers is approximately 50 000. The schools are one customer segment, representing annually some 500 customers.

The activities of the organisation of the FSC consists of four sectors;

1) the industrial stone analyses and research and 2) exhibitions and tourism promotion, 3) stone project and resource promotion and 4) education. The key actor of the FSC is an enterprise called Stone Pole Ltd. It sells managerial services on behalf of the owners of the FSC, which represent basic stone industry (Finnish Stone Research Foundation 70 %) and professional (2nd level) stone education consortium in Northern Karelia Region (North Karelia Municipal Education and Training Consortium 30 %).

Northern Karelia Adult Education Centre in Joensuu town (lying 70 km south of the FSC) organises public seminar services and pilot courses for students on geology and stone design. These educational activities are presented in the seminar-rooms of the FSC. Stone Pole Ltd is producing the basic customer services like guiding and stone shop services for those customers like tourists, who are interested about the FSC Stone exhibition. Visiting schools have special programme services produced by the Stone Pole Ltd, for 1-3 hours. Visiting schools are camp schools coming to Koli Resort, local preschools or local 3.-9. school classes. Stone Pole produces also geo-edu programmes for technical 2nd level professional schools and for adult groups, enterprise teams and foreign tourist groups. Schools can see the basic information of the learning programmes in the homepages of the FSC. In the Centre the schools can have new learning modules developed in the NEED project Work Package 3.

In the FSC complex there is an open soap stone mine and a high-tech factory using soap stone for manufacturing ovens and fireplaces for global markets. The visiting camp schools have an optional programme in the factory and the mine. The visitor services in the Stone Centre complex include also a restaurant/cafeteria for basic hospitality services for the visitors. In FSC the education programmes are not integrated in the hospitality services of the site of the local community; Stone Pole Ltd has not any contracts with the other local businesses who are actors on the supporting services for the camp school groups. However the FSC has a co-operation contract with the Friends of Ukko-Koli, the organisation who is the key actor in organising the camp schools services in Koli National Park.

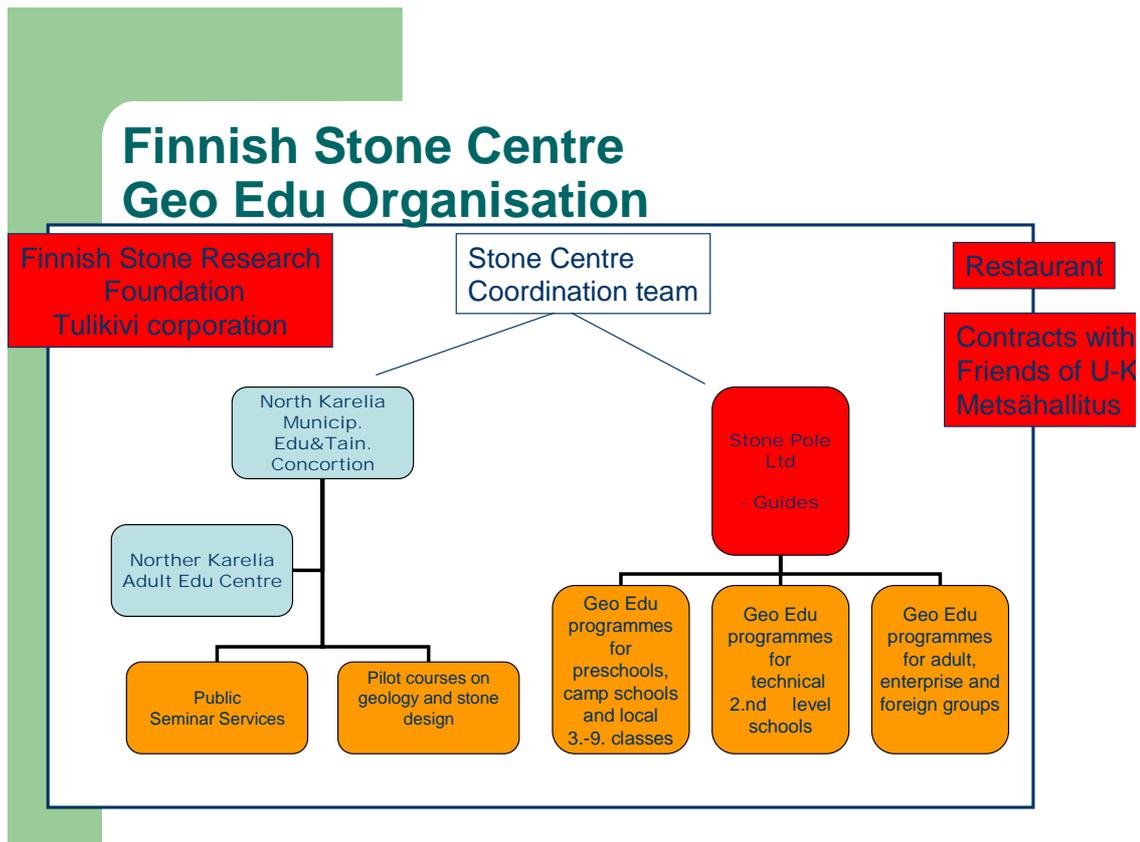


Figure 2.1. Organisation of the Finnish Stone Centre.

Strengths	Weaknesses
<ul style="list-style-type: none"> • strong binds to the stone industry • good cooperation with the regional tourism marketing business (Kareliaexpert Ltd and Koli Association) • enterprise as the key actor of service management • integration of 2nd level education and adult education to the FSC resources and the programmes • integration with the Geological research institute (Finnish Geological Survey) through the exhibition • excellent exhibition of stone as a education resource • school visits including in the curriculum of the schools • direct marketing to the schools inside 2 hours distance twice a year 	<ul style="list-style-type: none"> • no networking with supporting businesses (hospitality or transport services) for camp schools • no educational degrees in stuff of Stone Pole Ltd • guides not permanent workers • weak economical bases for camp schools • decreasing number of domestic customers; closed outside the high tourist seasons • complicated organisation due to complicated ownership of resources • camp-schools only a very small segment of the customers • no direct marketing outside the near by region schools

Rantasalmi Environmental Education Institute

Rantasalmi Environmental Education Institute (Rantasalmen ympäristökasvatusinstituutti YKI) is working in the Lakeland Visitor Centre in Rantasalmi Municipality in Eastern Finland. The YKI is a education oriented project unit owned by the Finnish Environmental Education Foundation. For the business matters the Foundation owns 100 % a business unit called Osprey Ltd.

The Yki has annually appr. 2000 customers in school classes who visit Ransalmi for their camp school week on days. In that role the YKI represents a project unit for Category 3 edu-tour services. YKI has education modules for camp schools about natural elements like geology and waters. It has speaciality on the sustainable development applications on rural development. YKI has contracts with the local municipality Rantasalmi on the use of the education rooms and facilities in the Visitor Centre. Rantasalmi municipality owns 50 % of the Visitor Centre real estate and building. The other half is owned by Finnish State under the management of Metsähallitus Natural Heritage Services. The Visitor Centre is functioning in the role of the Visitor services integrated to the Linnansaari National Park in the Finnish Lakeland.

The education environments of YKI lie in the Centre itself and in the near by nature. The new education module developed in NEED project is the geo-cultural trail Aika Matka-Mighty Tour, which begins in the front year of the visitor centre.

YKI has cooperation contracts with 5 supporting enterprises in the vicinity of the Centre in Rantasalmi. These enterprises function as services for beds, food and transport. YKI makes integrated marketing of the supporting services when marketing the edu-tour services.

Env Edu organisation in Rantasalmi Env Edu Institute

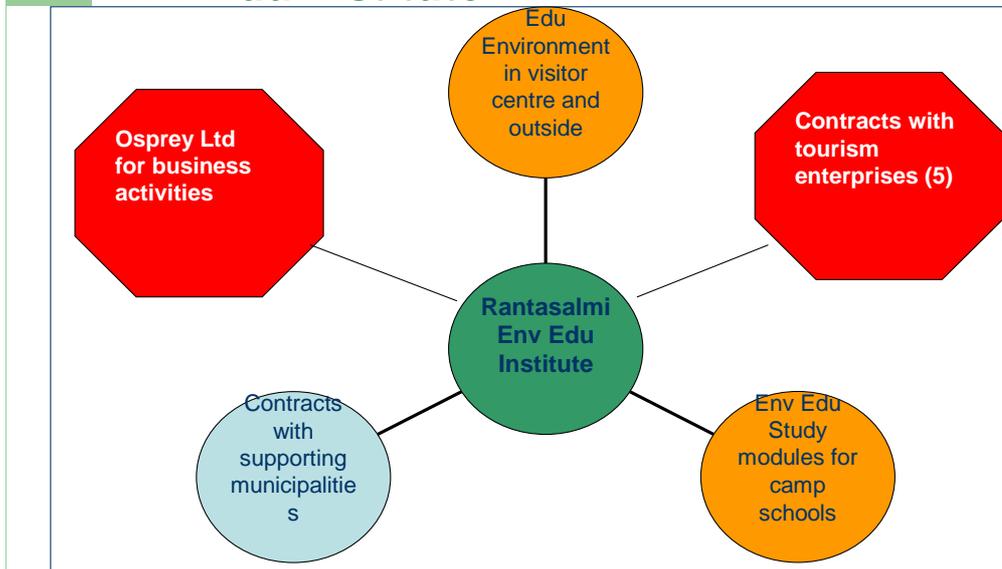


Figure 2.2. Rantasalmi Institute for Environmental Education; organisation.

Strengths	Weaknesses
<ul style="list-style-type: none"> • strong binds to the local municipality through the classrooms • enterprise as the assistant actor of service management • integration of 2 adult education to the YKI resources through project work • cooperation with the Geological research institute (Finnish Geological Survey) • integration to the National Park Visitor Centre with shared environments • contracts with local supporting businesses for organising school visits (integrated marketing) • camp schools a major segment of the customers • good integration to the local tourism marketing organisation 	<ul style="list-style-type: none"> • low level (only a few) networking with supporting businesses for camp schools • no educational degrees in staff of YKI • not permanent project workers mostly • weak economical bases for camp schools • decreasing number of domestic customers; closed outside the high edu-tour seasons • don't have reached national visibility • renewing of the programmes rather slow, old fashion methods

Koli National Park – environmental education services

Koli National Park is one of the 35 Finnish National Parks. It represents the Finnish iconic Lakeland landscape (forest hills and vast lake with isles) and has also the status of the Finnish National Landscape. Park has annually about 130 000 visitors, small part of them being schools and students (1000-2000 pupils per year). In park there are 4 educational nature trails with educational workbooks for teachers and the pupils in 1-3 age classes. Also park provides a modern Visitor Centre with educational exhibitions and AV - programmes. In NEED project the classroom of the Centre was redesigned and a new learning module was produced to be used both in and out in the terrain. The investments for the classroom was realised in 2010 with the own resources of the Metsähallitus Natural Heritage Services, who is in charge of the park management and runs also the Visitor Centre.

The customer services in the Visitor Centre are organised in partnership with a local NGO called Ukko-Kolin Ystävät ry (The Friends of Ukko-Koli Association). The Association Friends is a legal body and it produces the visitor services on the business bases. Most of the front line service actors are SMEs, who have contracted after tendering process with the Friends Association using 3 years written service contracts. In the Visitor Centre the Friends Association produces also the educational services.

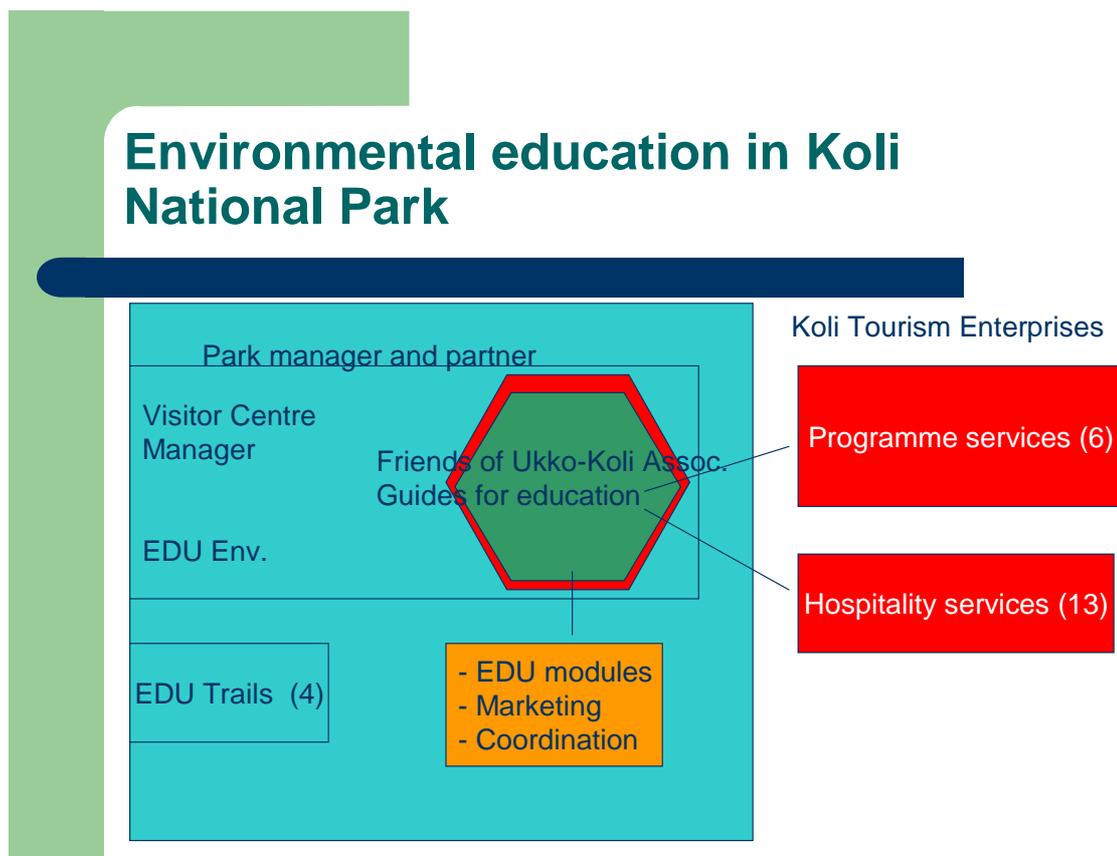


Figure 2.3. Environmental education organisation in Koli National Park.

The environmental education in Koli National Park is mostly for camp schools, which come mostly from Joensuu town and from bigger cities in Southern Finland. Some 10

classes are served annually and same amount comes to use the Visitor Centre and the park as a part of their own camp school program organised by the teacher himself/herself or organised by some other camp school producer without contacts to the local actors.

Park manager is the main responsible authority for controlling the quality of the education services. His assistant is the manager of the Visitor Centre. These two persons are the key actors of Metsähallitus Natural heritage Services in Koli National Park. They have signed the contracts with the Friends association and monitor its activities. They are also in charge of the learning environments in the park both in the terrain and in the Visitor Centre.

Friends of Ukko-Koli Association and its subcontractors (SMEs) are operative service producers in the learning environments of the Koli National Park. The Friends use the Education modules. Marketing of the edu-services and the coordination of the use of learning environments is done in the co-operation team (duo consisting of the manager of the Visitor Centre and the secretary general of the Friends Association).

The Friends Association has then contracted with several local businesses on the educational and social programme services (6 SMEs) outside the visitor centre in the park terrain and with the local supporting hospitality services (13 SMEs on commodities, food and transport).

Strengths	Weaknesses
<ul style="list-style-type: none"> • strong binds to the local community through the written contracts with local SMEs on supporting and field education services. • NGO acting as a social enterprise as the key actor of service management • integration in the park management through written partnership contracts for 5 years intervals since 2000. • development through EU-partly funded projects (Leader, Interreg) • cooperation with the Geological research institute (Finnish Geological Survey) • integration to the National Park Visitor Centre and the educational nature trails in national park with shared environments • integrated marketing • good integration to the local tourism marketing organisation • educational degrees in staff of Friends Association/SME subcontractors • National visibility • good amount of edu-modules 	<ul style="list-style-type: none"> • weak economical bases for camp schools • renewing of the programmes rather slow, • contracts on temporary basis according the tendering intervals 3-5 years. • International marketing and contacts on low level yet • supporting hospitality services have no environmental quality label to assure their responsibility about sustainable development

Leivonmäki National Park

Leivonmäki National Park the environmental education content is focusing on the geological resources in the nature. The peat and the bogs have been the main items in the education before NEED project., which introduced the glacial esker formations and boulders to the contents more deeply.

The visitor flow in Leivonmäki NP is rather low, some 10 000 visitors annually visit the park. The visitor services are poor, no visitor centre is there for the public services. A few Sees are working with the tourists and schools, mainly serving them accommodation and food. Local NGO (the Friends of Leivonmäki NP) and 1-2 freelance guides have developed field interpretation services, which may reach a few hundreds of visitors annually.

Education services in the park have no special marketing before NEED project.

Env Edu organisation in Leivonmäki National Park

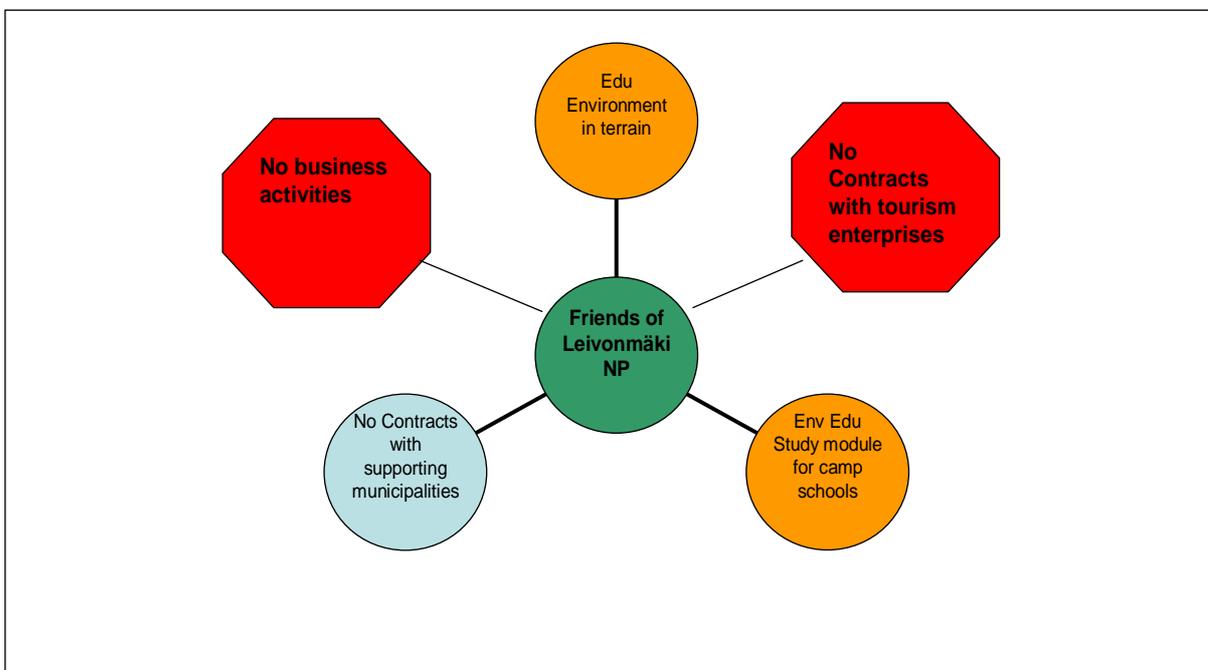


Figure 2.4. Environmental education in Leivonmäki National Park.

<p>Strengths</p> <ul style="list-style-type: none">• NGO as the assistant actor of service management for park• camp schools a major segment of the customers	<p>Weaknesses</p> <ul style="list-style-type: none">• weak binds to the local municipality; no classrooms• no cooperation with the expert organisations on content or edu methods• no contracts with local supporting businesses for organising school visits (no integrated marketing)• no integration to the local tourism marketing organisation• no educational degrees in staff• not permanent; voluntary workers mostly• weak economical bases• decreasing number of domestic customers; <p>no national visibility</p>
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2.2 Iceland

The contribution of Icelandic Partner in NEED was focusing on the theoretical framework of the camp-school development model. Iceland has experience on the nature camp-school activities but outside the project partnership. In the NEED-project some nature trips for school classes were piloted, but systematic analyses about their methods, results and partnerships were not collected. This pilot did not include business related services integrated in the field study trip.

2.3 Ireland

In the Ireland NEED -project there are six learning environments under development. Each currently provides geo-education in its own individual fashion. The learning environments are active partners in the Burren Connect Project which is actively seeking European Geopark Network Status for the Burren and Cliffs of Moher. If successful in this application, the Geopark structure may be the most relevant and effective organisation for delivering the model for organising business orientated services for environmental education in this region.



Fig. 2.3.1 Location of each learning environments identified as a yellow circle:
 A: Cliffs of Moher Visitor Centre
 B: Burren Centre, Kilfenora
 C: Burren Outdoor Education Centre
 D: Burren National Park
 E: Burrenbeo Trust,
 F: Farm Tours Co-Operative

The Cliffs of Moher Visitor Experience

The Cliffs of Moher are located on the western seaboard of Co. Clare and have, for centuries, attracted many visitors to view the natural wonder of its impressive Cliffs. The Cliffs have become one of the iconic images of Ireland and in the top three visitor

attractions of the country. In 2007 over 900,000 people visited the Cliffs of Moher, this was the same year a new and innovative visitor centre and services were opened. The Cliffs of Moher Visitor Experience provides parking, managed access to the Cliffs, an interpretative exhibition (*Atlantic Edge*), restaurant, café, retail areas, first aid room, toilets and a guiding service. The centre provides an educational service to national and secondary schools. However, its educational remit is hampered by the lack of a dedicated educational space within the building and the pressure on staff to cater for the heavy flow of visitors to the site; in 2009, they catered for 763,000 visitors. Educational and schools groups make up 5% of this number.

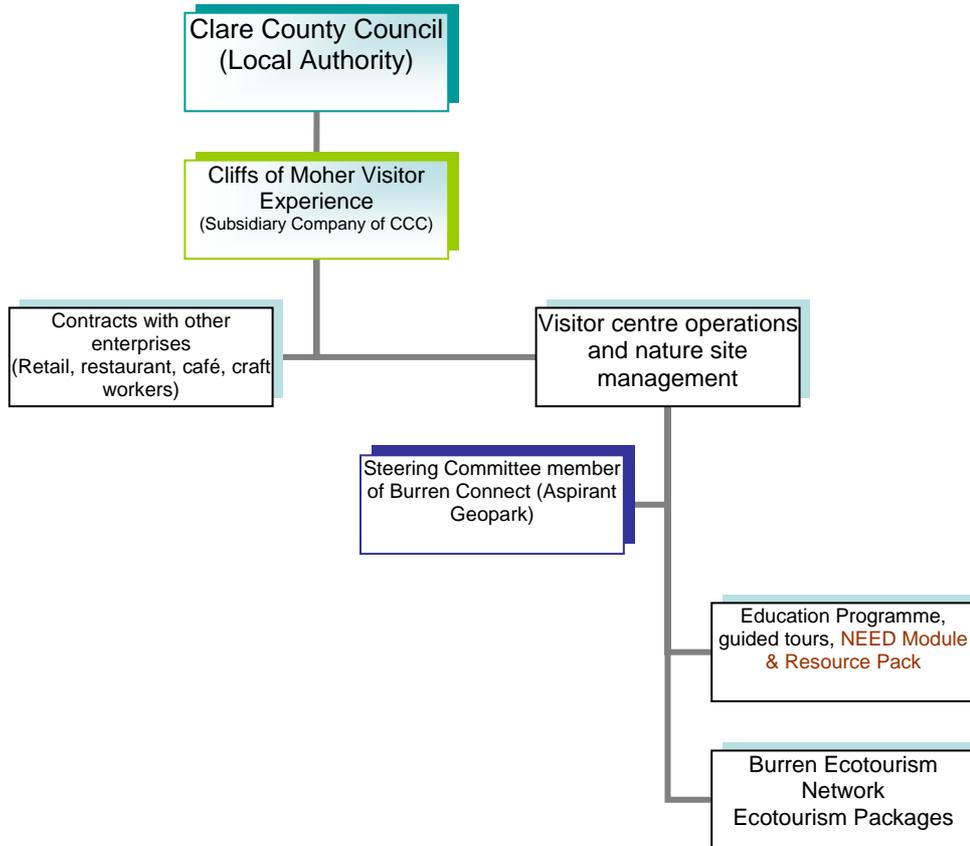
The organization is a subsidiary business of the local authority, Clare County Council. It has significant debts from loans taken out to construct the building, services and exhibition, however, it is managing to meet its annual budget targets. It employs 30 people, 23 full-time and 7 part time. It subcontracts its key revenue services; retail and food. As mentioned above, it has not fully tapped into its potential as an educational resource. Rangers do provide a guided tour service and an ecotourism package offering guided bird watching tours has been developed recently. It has become a member of the Burren Ecotourism Network, forging links and collaborating with other like minded ecotourism businesses in the Burren.

The NEED module utilizes the state of the art exhibition and outdoor environment to full effect and adds value to its educational programme. The rangers and education officer received in-house training on geology and assistance with the development of a geology guide for the Cliffs.

This organization has an enormous influence on tourism in the region, generating business spin off for many other tourism services; restaurants, accommodation, tour companies, etc. It is a Steering Committee member of the Burren Connect Project and is actively involved in the application for European Geopark Network status for the Burren and Cliffs of Moher.



Cliffs of Moher Visitor Experience Geo- Education Organisation



Strengths	Weaknesses
<ul style="list-style-type: none"> • Part of the Local Authority structure; guaranteed continuity • In the top 3 visitor attractions in Ireland; large audience • Quality exhibits and potential to develop large educational remit; employs an education officer • Permanent staff working as rangers • Contracts with local businesses • Member of Burren Ecotourism Network • Actively pursuing European Geopark Network status • Direct marketing to schools; • Strong marketing skills 	<ul style="list-style-type: none"> • Weak links to academic institutions and national government environmental organizations • No geo-educational expertise on staff • Educational programme a small part of overall remit and business; limited due to lack of resources re: staff time and space. • Financial pressure to repay loans; potential revenue streams sub contracted to outside businesses.

The Burren Centre, Kilfenora

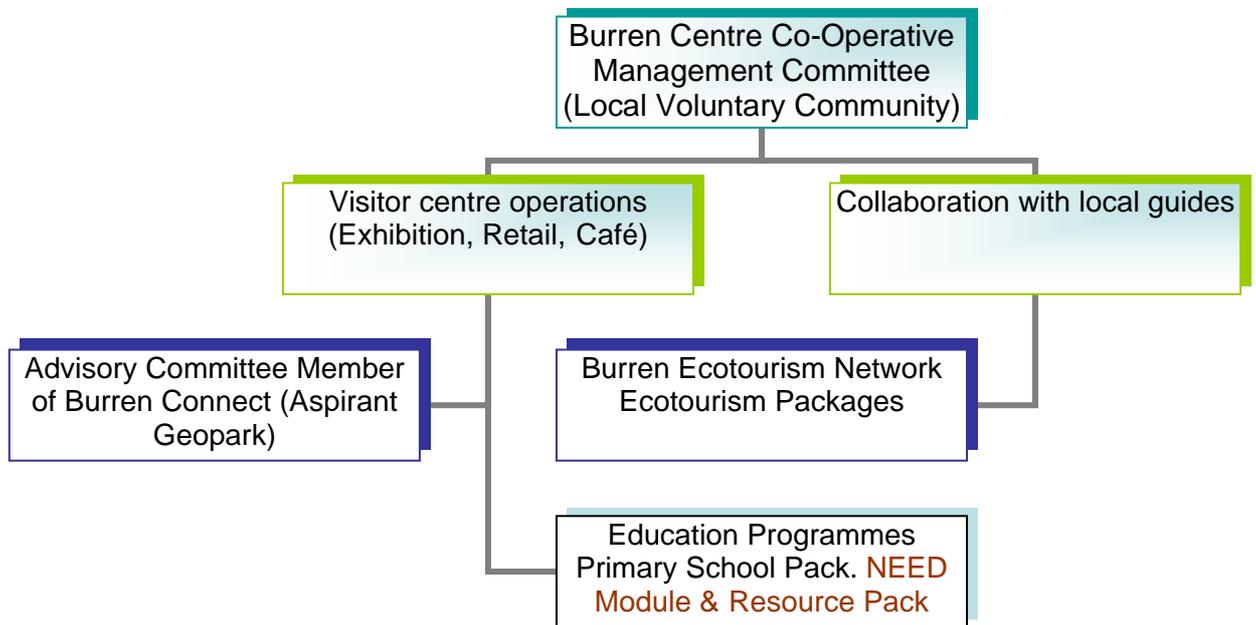
The Burren Centre, Kilfenora is one of the oldest interpretative centres in Ireland. It was established as a co-operative in the early 1970's with the aim of utilising the interpretation of the Burren landscape for visitors as an incentive for job growth and social development in the region; very innovative for its time. The Centre has been developed in phases since then and is currently going through a reassessment of its existing services and planning for future development. The centre has an exhibition, AV presentation, café, shop, parking and toilets. It also has a training room for developing computer and IT skills within the local community. In 2009, 50,000 people visited the centre, only 8% were schools and educational groups.

Deeply connected to its local community, the organisation is managed as a Co-Op, employs 5 full time and 11 part time staff from the area and is mostly reliant on revenue from admissions and some small amounts of grant aid to survive. It developed an education resource pack three years ago and has been actively pursuing the schools market, however, it does not have a dedicated educational team or space. Until recently, it has few links to other businesses, despite efforts to encourage joint ticketing and educational programmes with other visitor centres in the region. On joining the Burren Ecotourism Network, the organisation has formed a number of collaborations with other businesses and is actively seeking to be the organisational hub for the network. It is fully supportive of the application for Geopark status.

In NEED, a series of activities were designed to compliment the Burren Centre's *A Walk Through Time* exhibition. Tasks encourage students to pay close attention to the exhibits and answer a series of questions about what they see. Related activities were designed to focus on subjects such as The Last Ice Age; The Burren's Winter Climate; Impacts of Climate Change and Disappearing Glaciers.



The Burren Centre Geo- Education Organisation



Strengths	Weaknesses
<ul style="list-style-type: none"> • Strong links to local community • Financially well managed • Developing its educational remit; actively marketing to schools • Membership of Burren Ecotourism Network • Actively seeking to develop future potential and business links • Seeking to improve facilities, exhibits and programmes in 2011. 	<ul style="list-style-type: none"> • No formal links to local authority, academic or government environmental organizations • No geo-educational expertise on staff • Old fashioned exhibits and approach to educational programmes • No formal contracts with other businesses

The Burren Outdoor Education Centre

The Burren Outdoor Education Centre was established by the Vocational Education Committee (VEC) in the early 1980's. It is a purpose built and fully equipped centre and provides quality outdoor education experiences to all participants through exploring potential and achievement, group work and support, and the promotion of life long learning.

Facilities include meeting/ lecture room, dining area, games room, showers, drying room, playing pitch and volley ball area. Hostel style accommodation is provided in 2 dorms of 16 with 2 single rooms for leaders in one area and in 4 rooms of 4 and 2 twin rooms in another area. Quality home cooked meals are provided for residential groups.

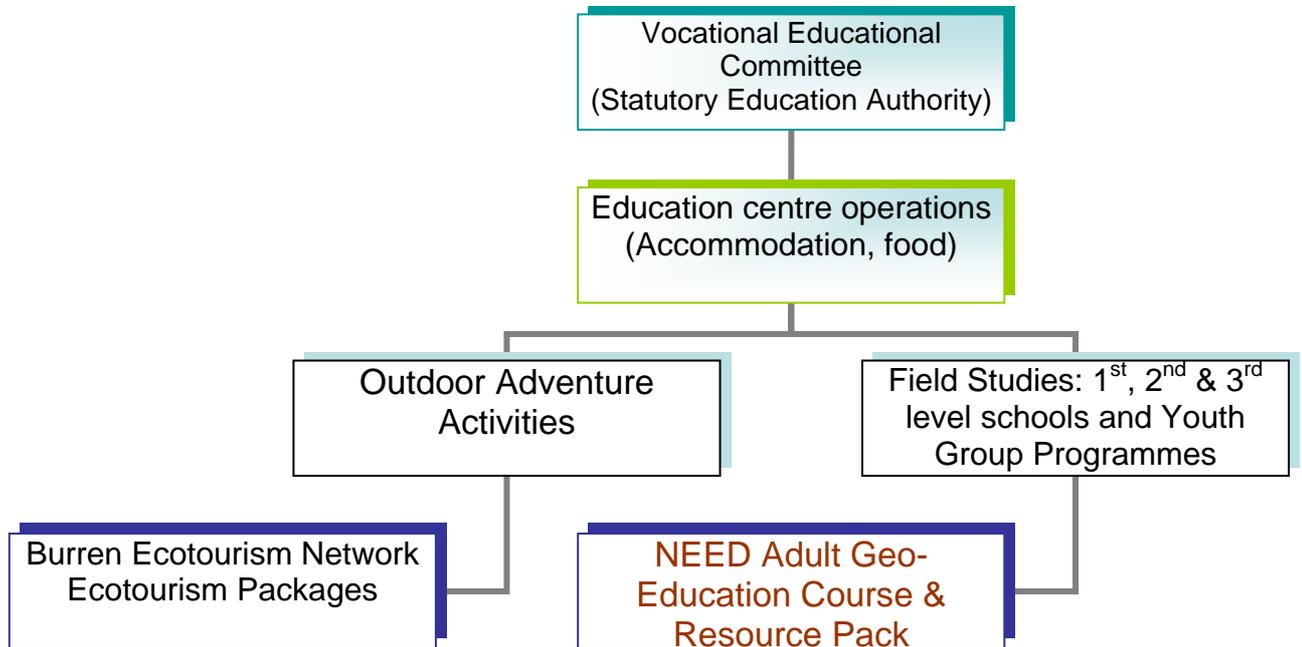
Outdoor Education is an approach to learning and education that focuses on learning through doing or learning from experience. It covers areas such as adventure activities, environmental studies as well as a residential experience and it presents a unique opportunity for people to be involved in situations where cooperation is essential, social barriers can be overcome and life long skills and leisure interests can be acquired and improved. The centre provides a range of programmes for schools and youth groups that are focused on the achievement of certified awards. In 2009 the centre had 8,000 participants on their programmes, 80% of these were school groups. The centre employs 6 full time and 14 part time staff.

The Centre provides a range of classroom based and practical fieldwork programmes that deliver at all levels of education including specific projects for Leaving Certificate classes. In NEED, a series of educational resources (maps, information posters, interactive Google Earth maps) have been developed for use on the centre's education programmes. A module on Elements of Geology and Landscape aimed at Leaving Certificate students and an adult evening course was developed to deliver an education programme to the local community, including staff of visitor centres and local professional guides.

The centre is a dedicated educational service run by a statutory education authority (VEC). The centre employs local people but had, until recently, few contacts and no business links with other visitor centres or businesses in the region. Its manager is now the Chairperson of the Burren Ecotourism Network and they have created ecotourism packages involving local businesses. The centre is supportive of the application for Geopark status for the Burren.



The Burren Outdoor Education Centre Geo- Education Organisation



Strengths	Weaknesses
<ul style="list-style-type: none"> • Educational remit and service supported by statutory educational body • Excellent educational programmes • Geo-Educational expertise and professionalism in staff • Range of on-site facilities • Has become leading member of Burren Ecotourism Network • Supports Geopark status for the Burren • Experienced at attracting schools market 	<ul style="list-style-type: none"> • No contracts with other authorities, universities, visitor centres and businesses • Building and ancillary services (accommodation and class rooms) in need of refurbishment

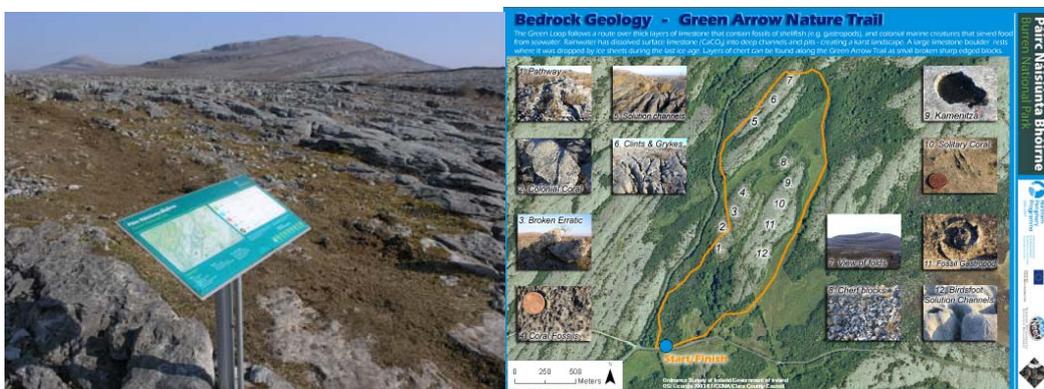
The Burren National Park

The Burren National Park is located in the southeastern corner of the Burren and is approximately 1500 hectares in size. The park land was bought by the Government for nature conservation and public access. It contains examples of all the major habitats within the Burren: Limestone Pavement, Calcareous grassland, Hazel scrub, Ash/hazel woodland, Turloughs, Lakes, Petrifying springs, Cliffs and Fen.

The park is managed by the National Parks and Wildlife Service, under the Department of the Environment. It's plans to develop a visitor centre and ancillary services within the park lands became mired in controversy and ultimately failed in its ambitions. As a result, the National Park provides very limited public services, has few staff dedicated to its management and no educational budget. However, negotiations are underway to develop a small resource centre in a nearby village and park staff have managed to develop a series of nature trails and maps. Though the area is very popular with walkers, and several local guides have permission to use the Park, only 300 people were provided with guiding/interpretative/educational services by Park staff in 2009, 25% were school groups. The Park employs 2 full time staff and 8 part time staff (employed seasonally in manual maintenance work). The full time staff have many other commitments outside of the management of the park and cannot give their full attention to its development.

In NEED, an established nature trail in the Burren National Park (Green Nature Trail) was surveyed and a subsequent guide to geology and fossils along the trail was produced. This map can be used alongside the educational activities developed for use at the National Park. Activities include Interpreting Geological Maps; Understanding the Rocks of the Burren region; Reading the Stones of the National Park; and how rocks bend (fold) and break (fault).

Burren National Park is a grossly under resourced facility and service. It has great potential as an educational resource for the region, but has no public facilities, even parking is restricted. Moves are afoot to create a small information centre in a nearby village. However, the Park needs a larger development strategy involving more dedicated staff to implement its educational potential.



The Burren National Park- Education Organisation



Strengths	Weaknesses
<ul style="list-style-type: none"> • Access to national expertise and departmental support • Strong geo-educational expertise in staff • Access to 1500 hectares of publicly owned land. • Supports Geopark status and works with Burren Connect to establish tentative links with other visitor centres. • Has agreements with local farmers and guides for use of the land 	<ul style="list-style-type: none"> • Lack of support from department and national organization • No contacts with local business • Very limited investment in educational remit • No public facilities • Proposed development within the park area is controversial • No marketing skills • Part time staff

Burrenbeo Trust

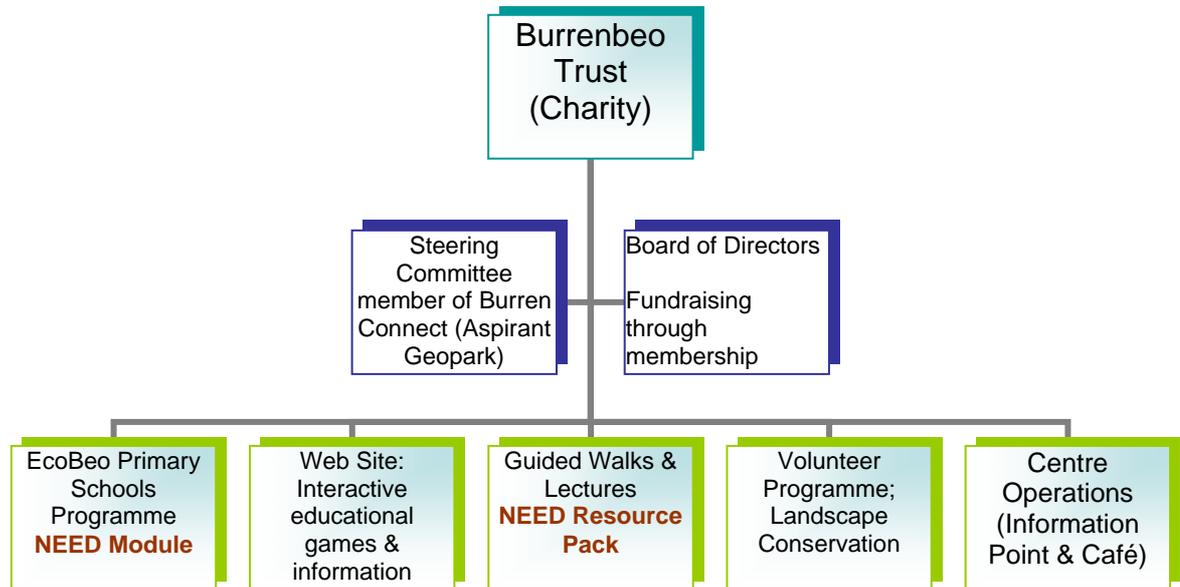
Burrenbeo is an information and education provider for the Burren region. The concept of Burrenbeo emerged in response to a real need for a one-stop information resource for the Burren. Since its inception, the work of Burrenbeo has included the development of the portal website for the Burren, www.burrenbeo.com, the development of an award-winning CD ROM; *Images Of The Fertile Rock*, the production of multilingual fact-sheets for the Burren, and the design and delivery of the educational outreach programme '*EcoBeo*' designed for national school children ages 10 to 12. Eco-Beo utilizes IT resources to create interactive on-line and school room education programmes. The Trust is based in Kinvarra, Co. Galway and is reliant on membership fees and grant aid. The Trust also provides guided tours, organizes a volunteer conservation programme and a series of lectures for the general public. In 2009, 4,000 people participated in their activities and programmes, 20% of these were focused on schools. The Trust employs 2 part-time staff.

To develop the IT element of their existing educational programmes NEED produced a series of educational activities were developed for integration into the Burrenbeo *Ecobeo* education programme. The activities incorporated digital 3D GIS-Google Earth maps into learning activities. This study module is designed for schools to use as part of their ICT (information and communication technologies) teaching and learning programme.

Burrenbeo Trust has a lot of support locally and with the wider international community. It has a very high profile and is recognised for its ground breaking work with out reach education programmes and IT educational initiatives. The Trust uses social and web based media to promote their remit and attract financial support. It deliberately remains independent of national and local authorities and sits on the committees of a number of national and local organisations, such as the Heritage Council and Burren Connect.



The Burrenbeo Trust Geo- Education Organisation



Strengths	Weaknesses
<ul style="list-style-type: none"> • Independent, focused on education and outreach • Strong membership base with access to expertise in geo-education. • Formal and informal links and access to heritage, farming and educational organizations. • Excellent marketing and PR skills • Strong range of organized activities 	<ul style="list-style-type: none"> • Heavily reliant on membership subscriptions to survive; lack of development funds • Web site in need of refurbishment and upgrade • Part – time staff

Clare Farm Heritage Tours Co-Operative

The Farm Heritage Tours Co-op is a group of farmers who have come together to interpret their land and promote their farming and cultural traditions. They have inherited an ancient and unique system that links them directly to pre-historic Burren farmers. They practice a tried and true tradition dictated by the landscape and are passionate about their role in its conservation. *'By coming on our walks you will learn how nature, culture and farming have shaped the Burren as you see it today. You will be participating in an ecotourism experience that supports our co-op, contributes to the local economy, supplements our farm incomes and helps us to continue the farming practices that are vital for the conservation of the Burren.'*

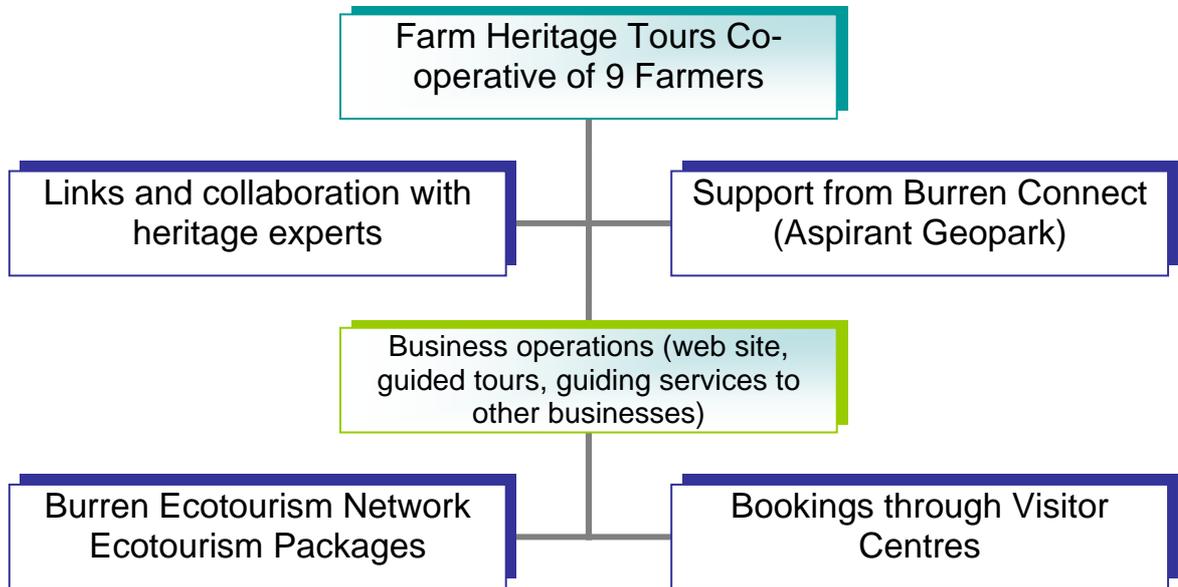
Most of these farmers have little or no experience of guiding and rely heavily on the heritage value of their farms, their knowledge of their traditions and their passion for conservation as the main appeal and attraction for visitors. They are slowly building their skills and confidence in guiding people through a very rich geological, historical and cultural landscape. The Co-Op was established in 2008 and began to advertise guided tours in 2010. To date they have provided tours to approximately 200 people. Their main target audience for the moment is special interest groups. They plan to attract school groups in the future, but for now are focusing on honing their knowledge of the Burren and practical guiding skills. The Co-op employs one part time marketing person.

Through NEED a geology audit of each member of the co-op's land was carried out, and resulted in tailored information on the geological features of each farm being provided to each landowner. An introductory training seminar on geology and landscape was delivered to the members. From this a series of geology and landscape information leaflets were developed and distributed to the landowners. This information was further developed into a **Resource Pack** that can be used by any environmental education business and by schools.

The co-op is a member of the Burren Ecotourism Network and has developed business links with a number of other members of the network. It uses a local visitor centre as its base and booking contact. It has used the geo-educational knowledge of various organisations, including Burren Connect, the Burren Outdoor Education Centre, LEADER and the National University of Galway to provide quality research, training in guiding, business management and marketing.



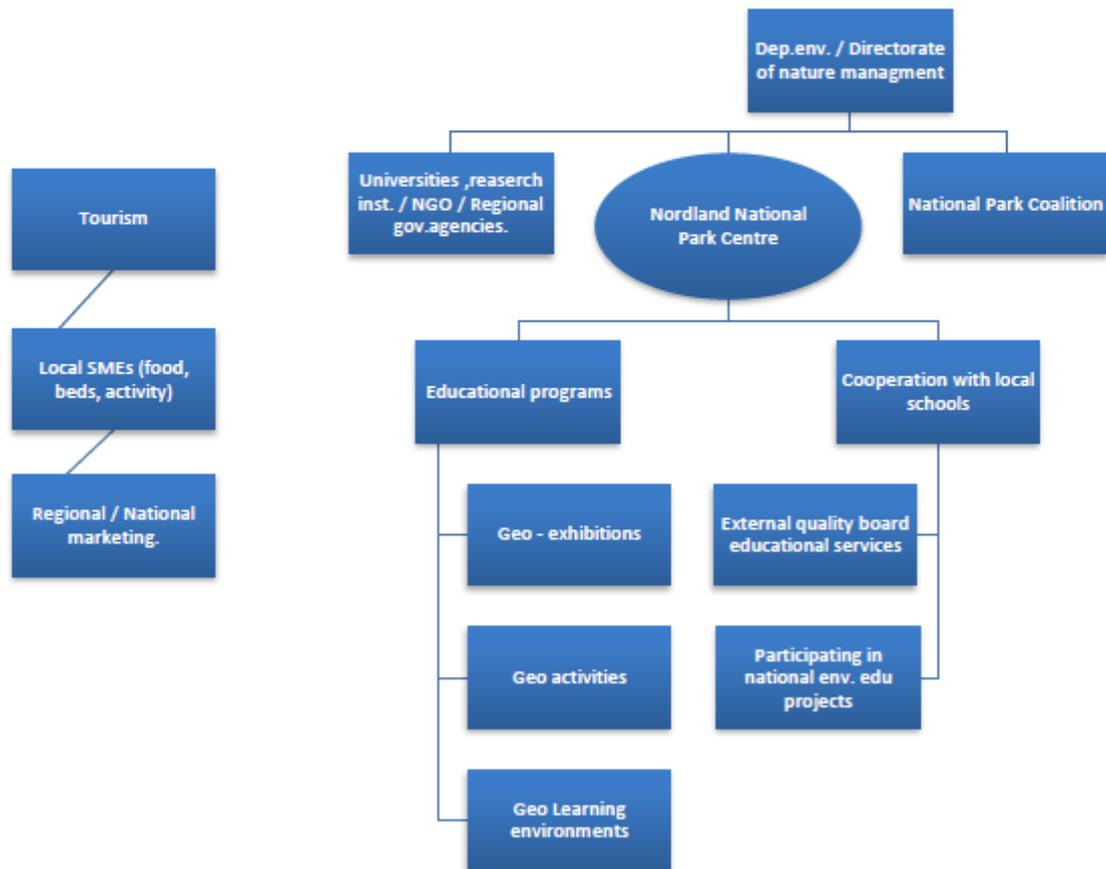
The Clare Farm Heritage Tours Co-Operative Geo- Education Organisation



Strengths	Weaknesses
<ul style="list-style-type: none"> • Strong geo-educational product • Encouraging landowners to engage in edu-tourism and education • Encourages conservation • Utilises geo-educational expertise • Sought guiding, business and marketing training through Burren Connect and the Burren Ecotourism Network • Establishing strong business linkages through the Burren Ecotourism Network 	<ul style="list-style-type: none"> • Need to set aside time to build skills and confidence • No financial supports once up and running as a business; weak economic base • Part-time staff and commitment from farmers; have to balance guiding with farming commitments.

2.4 Norway

Nordland National Park Centre, Geo- Education Organisation



Case Norway Nordland national Park Centre

Geo education organisation is connected to the National Park Centre. Weak connections to SMEs, but there are some entrepreneurs utilising development of increased knowledge in geo education. Few activity based tourism services, mostly food and beds. During the Need project the accessible geo knowledge are increased for individual visitors although groups and school classes still get higher quality of their services. Annual visitors are estimated to 10.000 in the visitor centre and 600 – 800 pupils / students. The local Storjord area attracts a higher number of visitors and there are possible to increase the number of people participating in geo education tourism products.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Established cooperation and network in the Storjord area • Educational programmes and exhibitions are the main product of the centre • High pedagogical guiding quality • Scientific documentation of local learning environments • Permanent geo exhibition • Quality board for educational programs • Activity based learning approach • Part of the national network of national park centres. • Some annual funding • Links to and cooperation to universities and research institutions • Establishment of the national park coalition 	<ul style="list-style-type: none"> • Weak connections to tourism organisations. • No local tourism / marketing agency • Lack of geo expertise in permanent staff • Few local SMEs working with tourism • Short summer / autumn season • Small organisation / few employees in the NNPS • Non formal cooperation / lack of formal contracts. • Exhibitions out of date. • Long travel distance for the schools

3. Principles and Criteria for successful education service model

Principles

Geo-edu services shall fulfil the basic targets and objectives of the sustainable tourism principles such as they have been defined in the IUCN guidelines, WTO guidelines and UNESCO and Geopark guidelines. The detailed criteria in the geo-edu tourism especially for category 2 and 3 school services are listed below.

Criteria

Good products and service model for geo-edu services shall fulfil the following criteria.

Quality control

- Certification for the educators and the supporting SMEs
 - teacher's certification for teachers
 - Green ecolabel for contracted SMEs
- training about the content and the methods and the learning environment to the SMEs and other actors

Education Curriculum

- Learning modules support the national curriculum
- Memorandum of Understanding between school authorities and the geo-edu producer

Responsibility

- Social neutrality
- Safety rules, controlled risk principle, safety plan, insurances
- First aid capacity
- honest taxpayers

Sustainability

- sound economy basing on actual costs
- ecological sustainability in modules and learning sites and CO2 footprint
- social sustainability in exchanging information and planning with locals

Locality

- using local resources; services, raw materials and products
- Interpretations from the local cultural heritage

Transparency

- tendering approach for business contracts
- open information and dissemination system

Accessibility

- learning modules for special groups
- no discrimination
- free access to edu- modules when produced with public funds

Organisation and networking practise

- partners in the edu-services are legal bodies
- Participatory Forum for stakeholders for planning and developing the geo-edu-services and the learning environments
- inputs and budget sharing with stakeholders
- integrated marketing

Innovativeness

- Learning capacity integrated with involvement
- innovative process for development preferred
 - development process educates all the participants
 - participation in the development increases innovation skills

4. Recommendations for geo-edu tourism service development model

NEED –project has recognised the following process favourable when developing good practise on the geo-edu service production. The development process is defined here stepwise.

Step 1. Recognise Stakeholders, experts and actors,

The possible basic stakeholders for geo-edu service development are these:

- governmental organisations which steer and fund the operational educational organisations
- governmental geo-research organisations which are interested to popularise the scientific knowledge for public benefit
- Regions who are interested about the sustainable regional development
- Municipalities, who are interested about organising and funding the education in their schools
- Schools who are interested about the education curriculum and the learning results with budget resources
- Academic research and education centres, who are interested about learning methods and development oriented innovations and studies
- National parks and other natural heritage sites and with them integrated visitor centres, who are interested about sustainable and adaptive management of their resources for the benefit of the nature and visitors
- Tourism SMEs, who are interested about developing their skills in the geo-edu tourism services to gain more customers and earn their living
- NGOs who are interested to join to the geo-edu development process on voluntary basis to steer the development on the direction they prioritise

The experts represent the following know-how:

- Geological and environmental research
- Pedagogical research and methods
- Natural environment management
- Business and marketing

The actors represent those legal bodies who have the best capacity to organise the operational geo-edu service in the given environment and community.

The key actor is the driving force of the operation. It is capable and willing to take the responsibility about the service providing process in the service provides network. It has enough managerial skills.

Step 2. Analyse the integration of different objectives and the players

Geo-edu service integrates three main stakeholder groups including public authorities, education expert organisations and business to the geo-edu production.

- Value added could be gained if NGOs in concern of the substance could be integrated to the development. NGOs also as a legal body can take the role of the SME as a third section intervention, especially when the development is in the beginning and the business interests or skills on geo-edu services are not developed enough on the region.

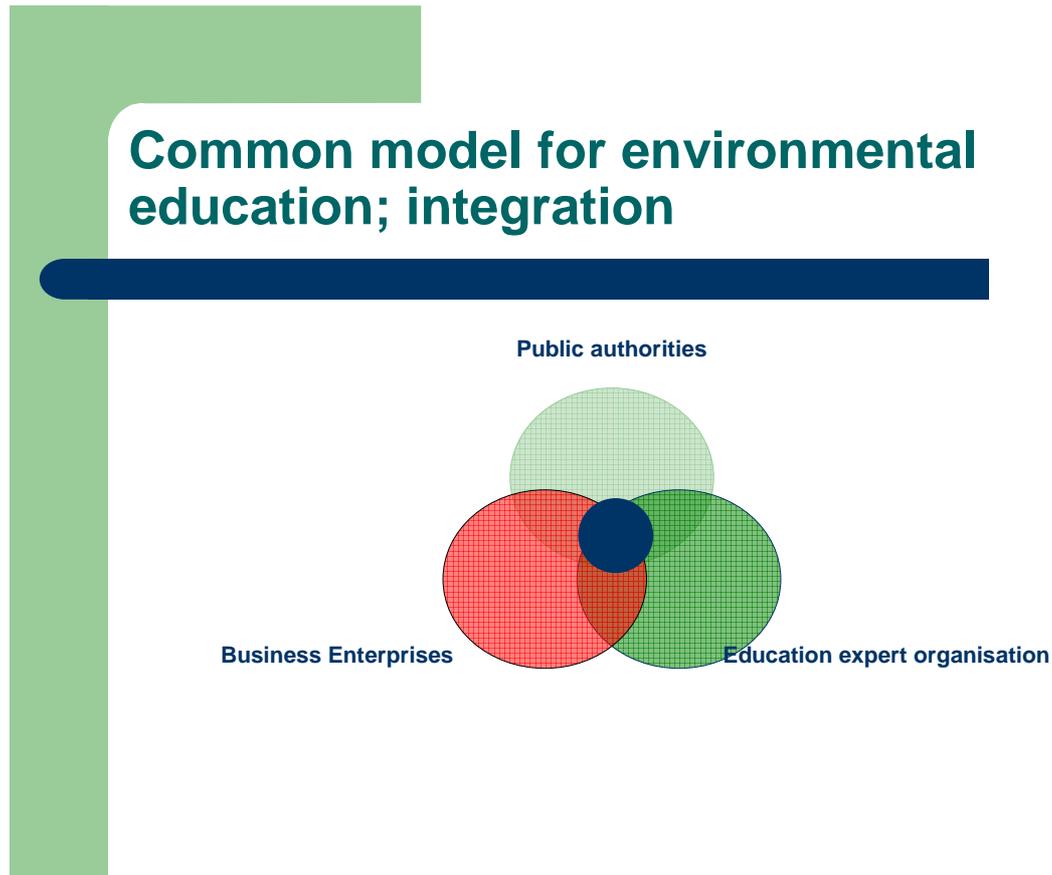


Figure 4.1. Integration of the sector interests in the geo-edu services

Step 3. Analyse and create commitments on the roles of the players in the development process

Common model for environmental education; roles of stakeholders

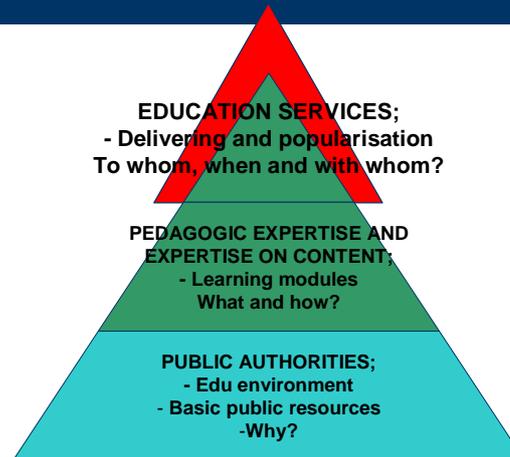


Figure 4.2. Roles of the core actors in the geo-edu service development.

The roles of the core actors are in the common model like as follows:

Public authorities

- Public authorities create and manage the environmental learning environments like National Parks, Geosites and visitor centre integrated to these natural sites
- Basic public resources are allocated to cover the investments and maintenance of the learning environments
- The reason for the environmental geo-edu has its grounds in the school curriculums and therefore environmental education is a public interest matter and cannot be produced only as a business product.

Expertise in pedagogy and content (geology and environmental sciences)

- to produce the learning modules to be used in extra mural learning environments according the curriculum and the best scientific knowledge
- to define what to learn and how to transfer the knowledge in the geo-edu services
- evaluate the educational outcomes and quality of geo-edu services

Geo-edu service providers

- to deliver the geo-edu learning module in the proper learning environment to the target group (school class)

- to communicate the scientific knowledge on a popular level appropriate to the target group (interpretation)
- direct interaction with the customer for the geo-edu delivering and capacity to organize the complete programme for successful geo-edu tour in Category 2 and 3

Step 4. Create an organisation with structure to solve the issues of integration

Geo-edu organisation has a network structure with several layers. This model of organisation creates permanent structures for changing information, creation platforms for participation and the local democracy, which according to the NEED project studies all have positive impact to the social capital gain on the remote rural areas for development.

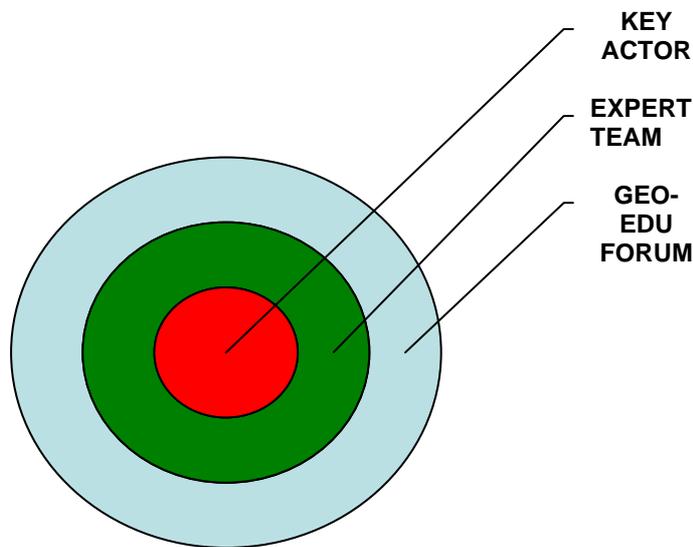


Figure 4.3. Layers of the organisation in developing the geo-edu service.

Layer 1: Forum of geo-edu stakeholders

Forum is a unit for exchanging information, discussing about the development plans and long term working strategies. It is not a legal body, but represents common interests and involvement. Forum is working on annual level; it may have 1-2 meetings per year. The Forum can be also some existing co-operation unit (like regional development group etc, which integrates the key stakeholders. The necessary stakeholders, who are not in the permanent set of participants, can be called as experts to the meetings when geo-edu items are on the agenda. The key stakeholders are listed in chapter 5.1. There can appear variation in different countries and regions according the local circumstances.

Layer 2: Geo-edu expert team

Expert team is in charge of the development of the content and the learning methodology. It is monitoring the results, outputs and impact of the geo-edu services on annual level. It is in the charge of major changes to the geo-edu programmes and training of the service

providers. Also it has contacts to the tourism expertise on annual basis changing the information about development plans and feedback of the services received. Geo-edu expert team has meetings with the service providers on the annual level for changing information on the development projects and feedback and training needs.

Layer 3: Key actor for the geo-edu services

Key actor is the operational unit for providing the geo-edu services to the final customers (schools and visitors). It shall be a legal body. According to the local circumstances it may be a public authority, regional developer agent, academic expert research or edu unit, SME or even NGO. Key actor must have opportunity to use all the resources needed for the geo-edu services on contracted bases. It must have the skills to communicate the content of the geo-edu modules, and serve the customers (schools and/or visitors), to make business actions, to make contracts with the associated SMEs around it and effective marketing.

Key actor informs its annual working plans to the Geo-edu expert team and the Forum of Stakeholders. It has direct contacts to the tourism expertise for developing the business and marketing skills. It organises the training actions for its workers and partners in the geo-edu service network. The key actor organises also the monitoring activities.

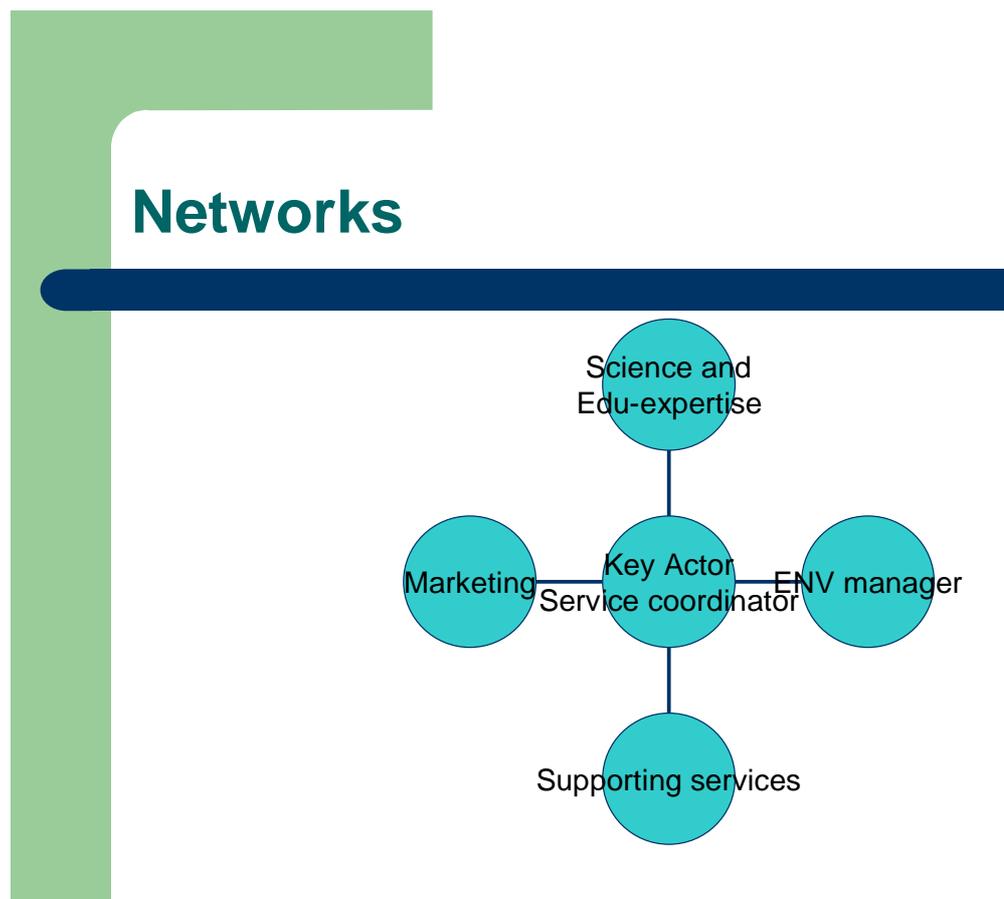


Figure 4.4. The network for the Key Actor of the geo-edu services.

Step 5. Organise the Know-flow in the geo-edu service development process and monitor the outcomes.

Process for geo-edu know-flow and feedback

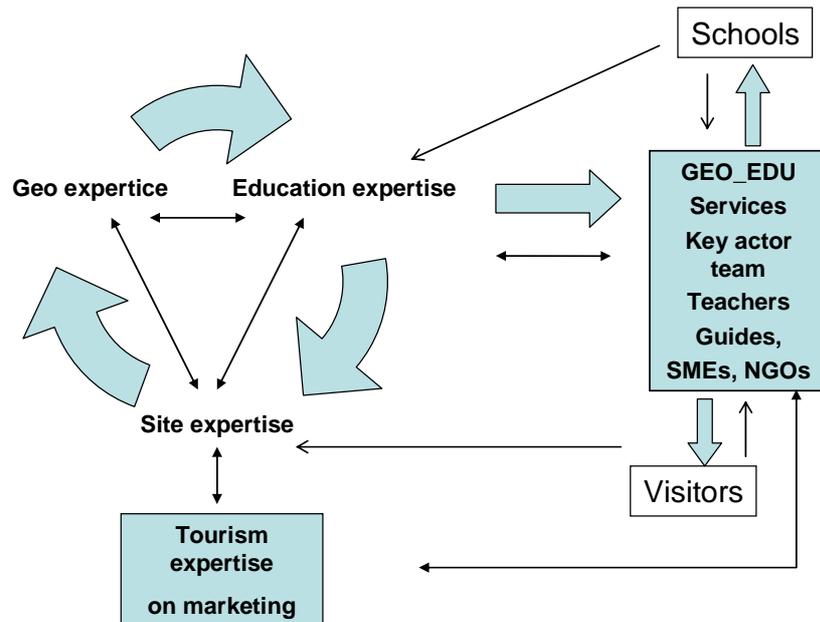


Figure 4.5. Process for geo-edu know-flow and feedback.

The core team in the know-flow development process is the group of experts. When geological education is to be developed in the context of valuable natural areas, the core team consists of geological, educational and site management experts. This core team produces this content and the site specific method for geo-edu services basically in the form of site specific learning modules. The learning module can be transferable from site to site, but also then the favourable site for the geo-edu production shall be defined in the site management responsibility. The learning modules when ready for use are then transferred and trained to the geo-edu service providers. This operational team can include teachers, guides, SMEs and NGOs depending on the site specific and cultural circumstances.

In the service designing the role of the Tourism expertise is crucial, especially because of the adaptation of the new geo-edu tourism service in the tourism service mix of the region. This means network building and the marketing profile designing and the operational marketing and selling activities. The Tourism expertise is negotiating these deep enough with the know-flow core team and also with the geo-edu service team.

Training of key actor and the associated SMEs is the task of the expert team. Training prepares the operators to make the service happen on the right and quality oriented way. The monitoring of the results, outcomes and effects of the know-flow includes several actions. The schools as the final product user (customer) give feedback to the geo-edu services and to the educator experts in the expert core team. The visitors as the final product user (customer) give their feedback to the geo-edu service team and to the site manager. This feedback goes also through the core team of experts to all of the member experts. The site manager transfers the business part of the feedback to the tourism expertise.

Geo-edu services in this model include both the educating services and the associated tourism services like accommodations, food, social programmes and transport. How these local services are to be arranged is a site specific issue. In the common model they are integrated in the service mix with contracts and training programme and common marketing approach.

Step 6. Organise an effective communication and marketing

Key actor together with the tourism expertise makes a communication plan and designs marketing strategy for geo-edu services.

Communication plan includes among others

- information about the product in the context of the criteria and the content
- information exchange within the network and
- into the media, including social media.

Communication plan is discussed and accepted in the core team of experts including the tourism expertise.

Marketing strategy includes the marketing tools like web and social media plus the integration of all of the operative players (associated SMEs etc) of the service.

- integrate the geo-edu service marketing in to the common regional tourism marketing strategy
- recognise important external actors such as the international tour operators, negotiate with them about the common issues and create partnerships where possible

The marketing strategy should be discussed and ratified in the geo-edu Forum.

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