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**The development of ecotourism cluster model in the
territory of the Belső-Somogy ecological network**

PhD Thesis Abstract

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Title of the Doctoral School:	Doctoral School of Earth Sciences
School Leader:	Prof Dr. József Tóth DSc Rector Emeritus
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I. INTRODUCTION, OBJECTIVES

The candidate has been focusing on the enhancement of the relation between nature conservation and tourism. Which could be the common elements, through which tourism is the least harmful for the environment, while the knowledge on the natural values reaches even more people and contributes to the enrichment of the local people. In this research she has searched for the symbiosis involving the above mentioned values.

Great number of researchers studied ecotourism, clusters and sustainable tourism. In last years in the Hungarian economic literature increasing number of studies was published on clusters, cluster based economic development (e.g. Buzás, N. 2000; Buzás, N.–Lengyel, I. 2002; Deák, Sz. 2002; Dőry, T. 1998; Grosz, A 2001, 2004, 2005, 2006; Lengyel, I. 2001; Lengyel, I–Deák, Sz. 2002; Lengyel I.–Rechnitzer, J. 2002; Patik, R. 2002).

In the beginning of her research there were not available publications in the field of ecotourism clusters, however, growing number of countries have arisen the subject recently. Where there was special attention paid to the sustainable development of tourism, researches related to the formulation of ecotourism cluster has been published by today. Hawkins (2001) studied the competitive cluster model in the nature reserve areas of Bulgaria.

We can find ecotourism co-operations not only in studies, but also in practice. Regarding the nature parks, the different tourism networks, regional co-operations, the acceptance for clusters is the basis of the development of ecotourism clusters.

The ecotourism cluster is connected to different types of sectors. The scientific study of them is characterised by interdisciplinarity, it relates to ecotourism, nature conservation, the different aspects of the economy (entrepreneurial knowledge, marketing, clusterisation) and also to the sustainability.

II.1 THEORY

Hypothesis No.1:

The ecotourism cluster is established in order for reaching the largest profit with special regard to the nature conservation;

Hypothesis No 2:

Besides the ecologic values, the cluster integrates the specialties of the (folk)art – cultural aspects, traditions, the specialties of the local economic, civil participants (e.g. historical, traditional, fishing, sport, gastronomy, hand crafts, local agricultural entrepreneurs). Nevertheless, it presents the role of the bio-initiatives as well as the ecologic values (e.g. the use of natural materials,

alternative energy, the handling of sewage and communal waste with bio methods);

Hypothesis No 3:

The ecotourism cluster decreases the environmental burden to the smallest possible, which is caused by the tourists in the area of the cluster;

Hypothesis No 4:

The members of the cluster take into consideration and respect the interests of the nature conservation to the highest extent;

Hypothesis No 5:

The optimal size of an ecotourism cluster: 12-14 participants, which involves 3 or 4 nature conservation actors (NGO, authorities), 4-6 economic actors and 4-6 local governments.

I.1 RESEARCH BACKGROUND

The main objective of the research is to determine the needed criteria to develop a Hungarian ecotourism cluster.

For reaching the main objective, the realisation of the following objectives is indispensable:

- *The formulation of the definition and the main characteristics of the ecotourism cluster*
 - Development of the definition;
 - Interpretations for pragmatic adaptation;
 - Exploration of the characteristics of the cluster;
 - Definition of the motivations for formulating the cluster;
 - Outlining the changes in environmental effects caused by the formulation of the cluster;
 - Studying the effects on nature conservation after the formulation of the cluster.
- *Exploration of the co-operation practice*
 - Preparation of a foreign case study in the Triglav National Park in Slovenia;
 - Exploration of the characteristics of an operating nature park in Hungary;
- *Determination of the territory of the ecotourism cluster based on the Belső-Somogy ecologic network.*
- *The theoretical approach of developing a cluster.*

II. MATERIALS AND METHODS

Primary sources:

1. Implementation of the research using the Delphi method for defining the ecotourism cluster, and the testing of the determined definitions;
2. Implementation of a perceptual research in the Triglav National Park Bohinj region, on the basis of the questionnaire developed by the candidate;
3. Personal interviews with the leader of the Írótkő Nature Park, György Bakos, the leader of the Somogy Nature Conservation Organisation, Tibor Tömösváry, the tourism and marketing employee of the Triglav National Park directorate Mojca Smolej, and the head of the information and marketing office of the Bohinj region: Klemen Langus and Tončka Malej;
4. The demarcation of the cluster area connected to the Belső-Somogy ecological network. For this the attraction register prepared in 1997 by the Hungarian Tourism Ltd was used and the aspects of core area demarcation of the South-Transdanubian Region Tourism Development Programme prepared by the KPMG were considered.

Secondary sources:

1. Regional specific data of the Hungarian Central Statistical Office and the Slovenian Statistical Office were used in the analyses;
2. Research on literary works for exploration of the characteristics of the area by using the regional development and tourism documents on the basis of periodicals and articles published on paper or on the internet;
3. Review of paper and electronic background documents given by the interviewers.

III. RESULTS

The results of the realised research are as follows:

With the help of the experts participated in the Delphi research and its test phase the candidate determined the followings:

- **Definition to the ecotourism cluster.**

System based on the uniform utilisation and nature conservation principles and the facilities of the land, in which the nature conservation and tourism enterprises and organisations competing and cooperating with each other take part simultaneously, in order to reach higher economic and social benefits. They accept the development and the preservation of the harmony between the nature conservation and the presentation of the natural values as common aims. In this system even together with other local economic activities tourism does not exceed the environmental capacity of the destination .

- **Degree of clusterisation:**

- *Partnership based, **regional development aimed, collective organisation** having its own management, which addresses common developments, marketing, research, information, training.*
- *Cluster, as a **network cooperation**, may contribute to the enhancement of common welfare and social cohesion and may serve as a quality management system regarding the natural conservation and the tourism services, and may operate as a trademark system.*
- *The cluster as an **economic cooperation based on the ecological values**, beyond the network cooperation, is a concentration of the organisations, which is not simply based on membership but rather is a cooperation of infrastructure, organisation and services related to the service elements of an area, addressing sustainable ecotourism development.*

- **Interpretations for pragmatic adaptation**

Ecotourism clusters can be interpreted as supply systems related to tourism and natural environment, which are market and services principled. They are established in a way when the geographic and habitat characteristics and the destination are considered.

- **The main objective of the ecotourism cluster:**

The main objective of the ecotourism cluster is that the organisations participating in it realise higher economic profit than they could do as independent organisations in the market, due to that more tourists come more steadily all year around, while the natural values are conserved and sustained jointly.

- **Supply of experiences:**

Besides the ecological values, the cluster integrates the specialties of the (folk)art – cultural aspects, traditions, the specialties of the local economic and civil participants (e.g. historical, traditional, fishing, sport, gastronomy, hand crafts, local agricultural entrepreneurs). Nevertheless, it presents the role of the bio-initiatives as well as the ecologic values (e.g. the use of natural materials, alternative energy, the handling of sewage and communal waste with bio methods).

- **The characteristics of the ecotourism cluster.**

1. *It can be connected to a relatively well understood territorial unit (e.g. region of Danube-Drava). (not necessarily conforming to current administrative or statistical borders).*
2. *There is a close co-operation, participants have common values, goals and ongoing dialogues between them.*
3. *Participation of actors with synergic and positive effect on each other and with trust in each other (in the fields of nature conservation, environmental preservation, tourism, relating services, infrastructures).*

4. *Actors are able to define cluster specific services and development ideas for reaching the common goals.*
 5. *It meets the requirements of the long-term sustainability of the tourism destinations by improving innovation.*
 6. *Establishment of the self-management and organisation on the lower degrees of clusterisation, which ensures a balance between the ecology and the economy through vote rates defined in the decision making systems.*
 7. *Efficient common marketing activities, which assumes framing an underlying environmental consciousness.*
- **The criteria of development of a cluster:**
 1. *The potential participants have acknowledged the need of co-operation.*
 2. *There is mutual confidence between the participants.*
 3. *The potential participants have designed the common aims.*
 4. *There is a defined task and responsibility share between the participants, which may be modified during the operation.*
 - **The most important motivations for developing an ecotourism cluster:**
 1. *The area has landscape, ecological, cultural values, which can be the basis of an ecotourism product, attractive and complex supply of experiences.*
 2. *The development of ecotourism is an organ part of the rural development programme being in design or implementation phase.*
 3. *There is common interest:*
 - *in the spreading of knowledge and growing of income through tourism for the nature conservation organisations;*
 - *in the improvement in the image and competitiveness of the destination, and the possibility of a new tourism product or specific target group for tourism organisations (in case of not having own tourism organisations of the above mentioned nature conservations organisations);*
 - *in the increase of the profit for the enterprises;*
 - *in the identity consciousness for the local people;*
 - *in the income and sources and the increase in the social welfare.*
 4. *The ultimate aim is the environmental land using, bio farming and the living opportunity based on ecotourism. (The conservation of the nature as attraction, the reservation of the identity of local people, the integration of the folk tradition and the improvement of the economic life of the rural areas.)*
 5. *Recognition of the common interests and co-operation, effective usage of the common resources, preservation of common values, the complementary knowledge of the participants, the evaluation and share of information, the increase of the income of the participants with*

decreasing the burden on the environment (with attraction management).

- **The influencing factors of the degree of environmental burden due to the development of a cluster:**
 - *The carrying capacity of the attractive areas and events for tourists, and control their respect.*
 - *The cluster decreases the environmental burden through the visitor management, better organisation, the interest specified offer for the visitors, common infrastructural developments and well-structured information system.*
 - *The ecotourism cluster is formulated on the basis of collaboration of environmentally sensitive participants. It spreads the environmental consciousness (using natural materials, local products, waste management, energy frugality, etc.). Therefore the tourists will be urged for keeping the written and non-written rules of environment and nature conservation.*
 - *The contamination depends on the level of education, the cultural characteristics, the bringing-up and the approach. The positive examples and the cleaner environment can modify the approach of the tourists.*
 - *The opinion about nature conservation and the nature consciousness of the society are getting better. The „biosphere services” are valorising. The need for healthy and nice environment is increasing. The increasing tourism attraction has fastened the development of ecotourism. The conservation and the sustainable usage meet at this point.*

The candidate implemented the following studies for exploring the ecotourism co-operation practice:

She prepared case study in the Triglav National Park in Slovenia, which has enlightened the characteristics of the spontaneous cluster. It has also contributed to the interpretation of the Tourism destination Management (TDM) and cluster systems and their coherence. The case study has contributed to the development of the Hungarian ecotourism cluster with the following results:

1. The tourism enterprises are able to provide complex ecotourism supply regarding their financial possibilities and by helping each other.
2. In the Bohinj region the tourism enterprises are concentrated, the service providers are competitors, but they also co-operate in the following fields (see Figure 1):
 - they promote each other's services;
 - they all appear in the promotion of the region;
 - they develop and advert common programme packages;

- they have established common management organisation;
- they are members of the tourism associations operating in the region.
- There are two active offices dealing with incoming tourism. The tourism suppliers are in direct relation by phone or in electronic ways, they operate common reservation systems. In Hungary in the Belső-Somogy cluster area the tourism information offices are missing, the relation between the suppliers is weak. The formulating TDM organisations will be able to compensate this weakness. For those settlements, which are not members of any TDM organisation, the cluster will provide the integration.
- In the Bohinj region there is a working effective flow of information, which is managed by the TD Bohinj office. In the Belső-Somogy cluster area the flow of information is not convenient, there is no connection between the settlements of the northern part and the southern part of the cluster.
- The association operating in the Bohinj region organises different types of trainings and events (e.g. catering, management).

Co-operation system in the Bohinj region

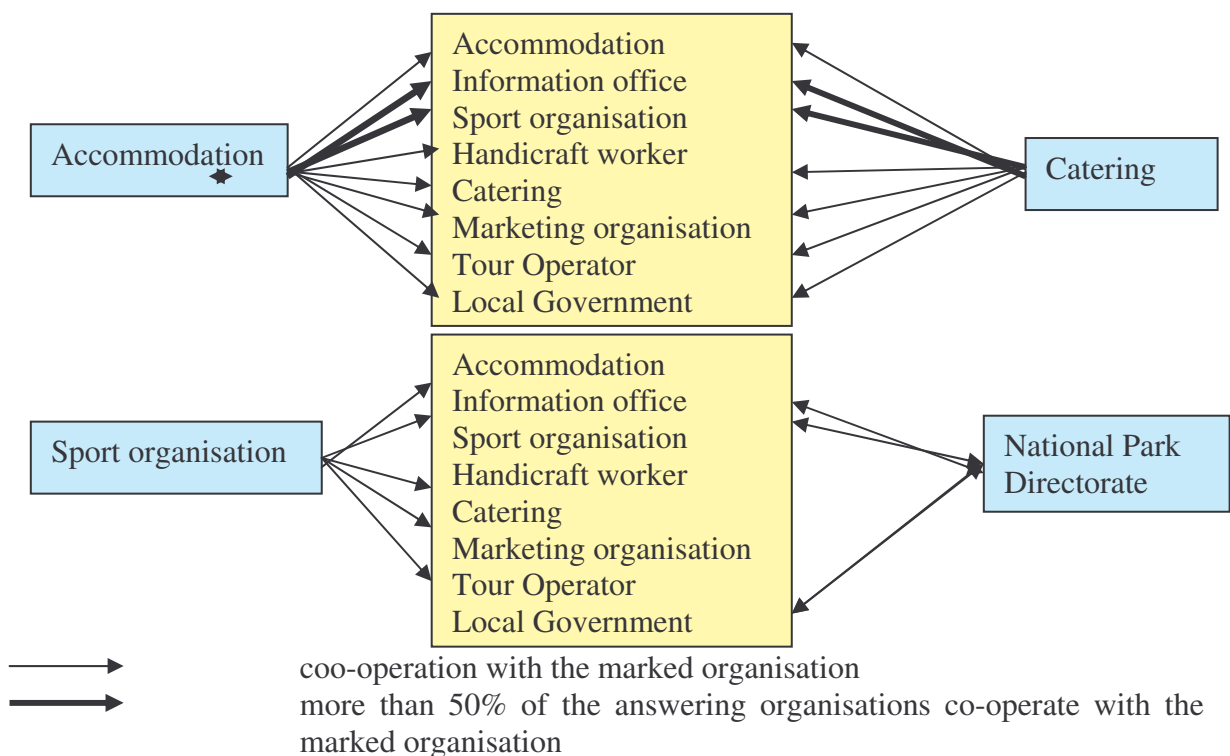


Figure 1: Co-operation system in the Bohinj region (constructed by Á. Fodor)

Summarising, in Bohinj region a spontaneous cluster has been formulating, which is not membership based. The cluster tasks are implemented by two organisations. The cluster is based on a wider interpretation of ecotourism, in

winter-time it focuses on the different types of ski services, from spring to autumn guided ecotourism tours, excursions, nature observations, angling, climbing and all year around ecotourism programmes invite the tourists.

The two organisations fulfil the cluster tasks, such as planning, development, innovation, research, cluster marketing, communication, monitoring, trainings, representation, quality standards.

Exploring the operational features of the Íróttkő Nature Park designed the main stream of operating an ecotourism cluster for the candidate. This was the basis of formulating the organisation and the operation system of the cluster. The decisive operational experiences see as follows:

- The practice of the last few years shows that the members (16 settlements, total 80 members) have accepted the operational rules of the Nature Park. The co-operation is successful, completing the expectation of the members.
- The members fulfil the expectations under the articles of the Association. The members are satisfied with the services provided by the Association.
- Paying the marketing costs that foster the attraction of visitors is a problem for the entrepreneurs and the Association, as well; as the satisfaction of the members varies. Most of the members cannot afford higher marketing costs, so they buy the lower cost marketing package, but the result is smaller, as well. (see Figure 2) The average length of stay in the Nature Park increased from 2.15 in 1989 to 3.12 in 1997. By the end of the studied period it has decreased to 2.54 days. The efficiency of the Nature Park seemed spectacular at the time of its foundation. Development and marketing are the key factors for going on successfully. If there is not enough resources for them, tourism will disappear from the settlements. After the recognition of it, a Nature Park Programme has been designed in the „Kőszeg Subregion Development Concept and Programme”, which approaches integrated development of tourism in a holistic way, while it also considers the programme on tourism, culture landscape and heritage conservation and the conservation of natural environment.
- The form of association can be suitable for operating the cluster. The vote shares are suggested to be included in the constitution. The good share of votes is one of the key success factors for the cluster.
- The Íróttkő Natúrparkért Egyesület (Association for the Íróttkő Nature Park) has become regional organisation in the last 10 years, which carries out researches, organises programmes, manages common applications and manages the marketing activities of the area.

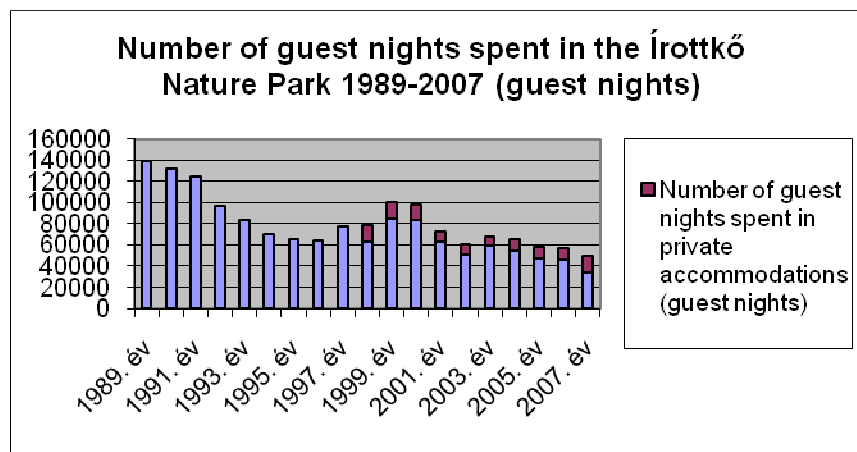


Figure 2: Number of guest nights spent in the Írottkő Nature Park 1989-2007, (Source: HCSO information database 2009.08.15. constructed by Á. Fodor)

For determination of the method of impoundment of the cluster area based on the Belső-Somogy ecologic network and its' operational principles the candidate has stated that:

In case of the ecotourism cluster local and horizontal co-operative partnership is not sufficient for the conservation and professional interpretation of the nature reserve areas and natural values and for the conscious management and organisation of tourism. Because of the complexity of the subject the regional cluster determined by Porter can be realistic. This cluster integrates the competitive and co-operative enterprises of an industrial sector, relating and supported sectors (nature conservation, ecotourism), financial organisations, suppliers and infrastructural background organisations (education, training, research), entrepreneurial associations (chambers, clubs) through its innovative co-operation system.

- **The candidate has developed steps for the demarcation of the ecotourism cluster based on a pilot area, the Belső-Somogy ecologic network and its destination. The steps are the followings:**

- Step 1: interpretation of the ecological network, summary of the geographic characteristics of the area;
- Step 2: introduction of the Somogy Természetvédelmi Szervezet (Somogy Nature Conservation Organisation – STVSZ) and the territory handled by it;
- Step 3: introduction of social, economic characteristics of subregions related to the area handled by STVSZ;
- Step 4: tourism supply and demand analysis of the related subregions;
- Step 5: the demarcation of the cluster area

The ecological network can be found between the Korokna and Boronka creek. This is the basis of the ecotourism cluster. For reaching complex ecotourism

supply, connection of further attractive settlements is indispensable. The area separates ecologically from the Kis-Balaton area and the Zselic. The Belső-Somogy ecological corridor involves the Nagyberek, the Boronka Landscape Protection Area and the Külső-Somogy area and in the Southern areas the Danube-Drava National Park and the Belső-Somogy areas.

The Belső-Somogy ecological network concerns seven statistical subregions: Barcs, Fonyód, Kadarkút, Kaposvár, Lengyeltóti, Marcali and Nagyatád subregions. The border of the subregions is wider than the ecological network area, but it is convenient for social and economic analysis. The seven subregions (180 settlements) are characterised by obsolete economic structure. Most of the settlements are rustic, where the share of people older than 60 years is getting higher, in most of the subregions it reaches 20%, that is why the economic life support capability is decreasing here. The basic and clinic health care is convenient. The job seekers have a significant share within the resident population aged 18-65. The share of permanent jobless people is also significant, which reflects economic structural problems and its disadvantageous situation. Regarding the registered enterprises, most of the enterprises can be found in the Kaposvár and Fonyód subregions. There is further leeway in public services. There is no secondary and higher education in tourism, but in the surroundings large scale of possibilities is available.

The tourism supply of the area is island-like. Between the (geographic and core area) separated services there are hardly any cross roads, e.g. trails. The suppliers are situated disorganised in the area. Initiatives have been developed to integrate these services. These try to connect the similar active tourism suppliers, e.g. horse riding trails.

In the seven subregions surveyed by the candidate minimum **national I type tourism attraction** can be found in 58 settlements. Such **attractions where significant part of the visitors arrive from abroad**, and represent wide market segment can be found only in 6 settlements: Balatonberény, Balatonkeresztúr, Balatonmárfiafürdő, Fonyód, Kutas and Nagyatád. The main attraction of the Balaton inshore settlements is the lake, in Kutas the Hertelendy Castle Hotel and in Nagyatád the thermal and medicinal bath.

International attractions, which can fulfil demands of only certain guest segment, can be found in 60 settlements. 27 settlements is famous for hunting; Barcs, Csokonyavisonta, Szulok, Buzsák, Nagybjom are famous for their baths. Significant ecotourism areas are Barcs and Nagyberek surroundings.

The number of national attractions fulfilling demands of more tourism segment is 42 in the area. The castles, museums, angling lakes, monuments, sport and cultural events are famous.

There are a **great number of national attractions for tourism groups of specific interest** (122). The most famous ones are the Danube-Drava National Park, the Boronka Landscape Protection Area, Nagyberek, but we can also find

forest schools, exhibition places, angling and horse riding possibilities, events and the South-Balaton Wine Road stations.

Fonyód excels from the area regarding its international attractions, where despite the decline the number of guest nights exceeds 160 000, while this figure is less than 10 000 for settlements with only national or regional attractions. (see Figure 3)

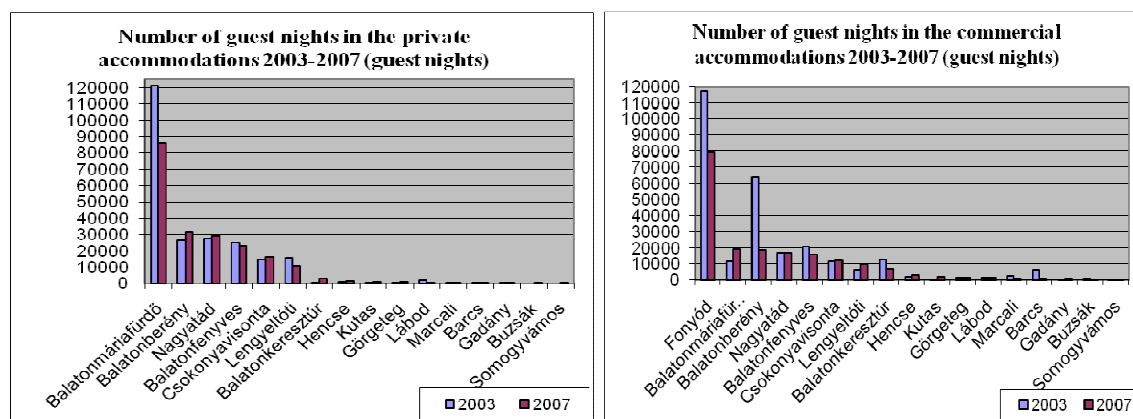


Figure 3: Number of guest nights in the accommodations of the research area 2003-2007
(Source: HCSO TSTAR, constructed by Á. Fodor)

There is less tourism in the internal parts of the research area. These can be characterised by potential tourism development areas. The five star Hertelendy castle hotel in Kutas providing high level services can generate faster development in the surrounding settlements. For reaching this, convenient marketable products and positioning is required.

In the field of tourism supply STVSZ has determining role. The studied ecological corridor is owned by it. It started the land rehabilitation works in the last two decades and has begun to develop different ecotourism forms in parallel. The STVSZ organises six-day-long riding tour between the Lake Balaton and the River Drava, an ecotourism information and visitor centre in Somogyfajsz, operates the Otter Park in Petesmalom, manages the rehabilitation of Nagybereki Fehérvíz and Csokonyavisonta Lakes. It organises guided tours for bird watching, ecotourism camps and forest school. The STVSZ is a coordinative and active organisation, which has its own relationship for organising all the tours and programmes. For a complex supply supplementary services and programmes are lacking. The accommodations and the attractions are not coordinated conveniently, the supply is not integrated. For resolving this problem the ecotourism cluster can reach significant results with the active management. The supply in the surrounding settlements generates inbound tourism, which results in the increase of the profitability of the area. The cluster may integrate the settlements signed in the following map.

[illegible]

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- **The candidate made suggestions for the organisation system and the theoretical method of operation of the cluster:**
- The first level of clusterisation determined with Delphi research is a partnership based, regional development aimed, collective organisation having its own management, which aims to realise common developments, marketing, research, IT, information, training. At the same time the development of trade mark system and strengthening of the network may also be started. On the basis of the above mentioned the tasks of the cluster are: research, development, marketing and communication, training, determination of quality standards and its monitoring, development of network.
- The candidate considers the association form convenient for operation of the cluster, which is based on the practice of Írótkő Nature Park. The key success factor of the association is the determination of a convenient vote share of tourism-related environmental organisations, local governments, institutions and the individual members. For the operation a cluster management organisation with 5-7 persons is needed.
- The members of the cluster pay fees, according to the required services. The candidate has not made suggestions for the certain amount of the fee, considering that the model is not suitable for determination of the number of members. The amount of the fee is suggested to be in line with the different service packages, defined in the business plan prepared at the starting of the cluster.

The candidate has studied the theoretical mutual integration of Belső-Somogy Ecotourism Cluster and the TDM organisations, which has the following results:

There should be considered, which of the following solutions is more cost effective.

1. **In local level** the local governments will be members of the local TDM organisations near Nagyatád and Balatonberény. The settlements in the internal area and by the Drava River will stay out of the local TDM (LTDM) system. The local governments joining the LTDM pay membership fee for the LTDM. As for the cluster it is worth designing more payment categories according to the different eligible service packages. At starting the cluster the business plan will specify the resources needed for operation, and this will be the basis of the different service packages.
2. **At micro-regional level** the formulating TDM (MRTDM) organisations will integrate the LTDM organisations and further institutions, organisations. The cluster may also be member of the MRTDM if this

organisation is open for co-operation. The agreement between the cluster and the TDM organisation will specify the tasks and costs. We cannot expect from a TMD organisation to deal with organisations out of their destination. The convenient and fruitful connection may be the well designed co-operation.

3. **On regional level the** membership of the Regional TDM organisations (RTDM) will be constructed by the MRTDM organisations and further joining organisations. In this level the Belső-Somogy Ecotourism Cluster may join the RTDM, too. The share of tasks should be designed in the membership contract.

The connections are signed in Figure 5. It is worth considering the optimal share of tasks between the cluster and the different types of TDM organisations.

- **Regarding planning**, the cluster needs individual plans, which contains the co-operation, synergic effect and connections to the different level TDM organisations.
- **Regarding development** the cluster focuses on the infrastructure and services (accommodation, supplementary services, IT, etc.) based on ecotourism, and the relating suprastructure. Meanwhile TDM organisations regard and develop all the representing tourism products of local and regional level. In this case the development of the suprastructure needs coordination in the plans. These can be specified with common resources and coordinative implementation. As for IT and flow of information the permeability must be ensured between their separate systems.

The potential connections between cluster and TDM

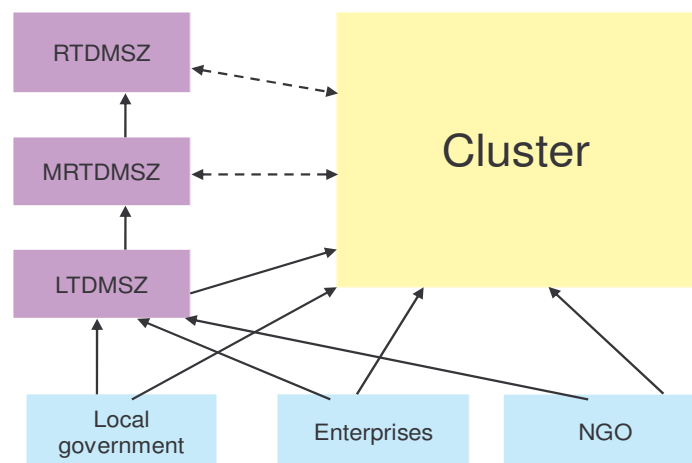


Figure 5: The potential connections between cluster and TDM (constructed by Á. Fodor)

- **In the field of innovation** the cluster focuses on the ecotourism innovation and helps to implement and coordinate it.
- **In the field of research** the cluster carries out studies in close co-operation with MRTDM and the RTDM organisations in common fields of research. The TDM organisations are suggested to inform the cluster about the other types of studies.
- The cluster focuses its **communication and marketing** on the ecotourism product, in which MRTDM and TDM organisations may help. Ecotourism is competing with other tourism products in the destination. In the field of ecotourism an effective extra-regional co-operation is implementable in communication and marketing activities.
- As for **monitoring** the cluster performs it individually on the basis of own methods, sharing the experiences with the RTDM organisations, focusing on ecotourism.
- The **specific trainings** should be organised in co-operation with the TDM organisations.
- In case of the cluster the formulation of **quality standards** focuses on ecotourism, while RTDM organisations design their system for all the available tourism products of the destinations. Close co-operation is required in the course of determining ecotourism standards.
- Realising the **representation** the cluster and the TDM organisations act separately, they are competing with each other.
- In the course of the **building of the network and enhancing the co-operation** the cluster and TDM organisations play their roles separately.

Discussion

After examination of the determined hypothesis through the implemented research the candidate states the following results:

Hypothesis No 1:

The ecotourism cluster is established in order for reaching the largest profit with special regard to nature conservation.

In the end of the discussion about the formulating definition, the hypothesis has been proved: according to the drawn up statement „...the cluster is formulating for reaching larger social and economic profit...”. This reflects that the revenue of cluster participators increases because of the larger flow of tourists, so the amount of taxes paid by the organisations also increases. *The hypothesis is proved.*

Hypothesis No 2:

Besides the ecologic values, the cluster integrates the specialties of the (folk)art – cultural aspects, traditions, the specialties of the local economic, civil participants (e.g. historical, traditional, fishing, sport, gastronomy, hand crafts, local agricultural entrepreneurs). Nevertheless, it presents the role of the bio-initiatives as well as the ecologic values (e.g. the use of natural materials, alternative energy, the handling of sewage and communal waste with bio methods);

The candidate has stated three approaches for the supply of experiences during Delphi research. The 2nd hypothesis was also indicated in the optional statements. The respondents had the possibility to choose more than one statements. 75 percent of the experts signed the third statement besides the above mentioned statement (see Figure 6). In the end the candidate preserving the original statement (and with the elimination of hunting) completed the definition. Therefore the hypothesis is proved.

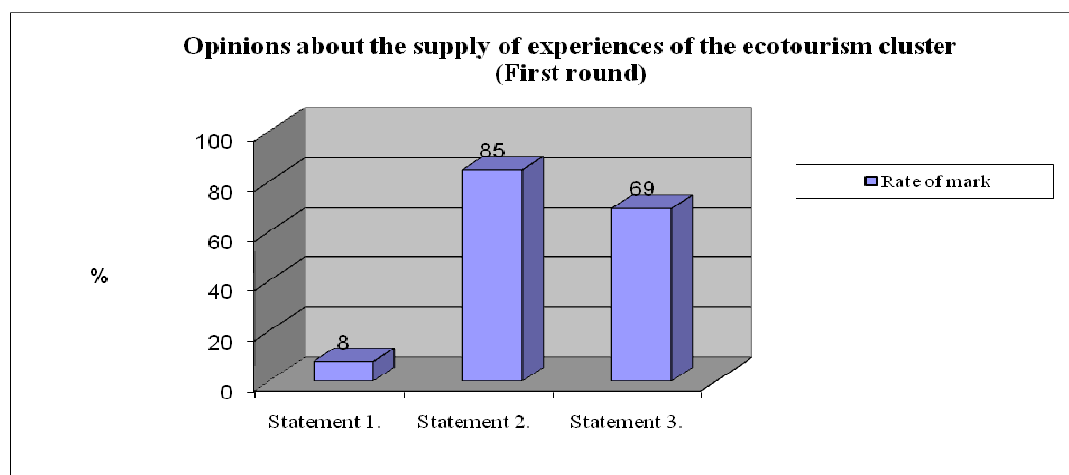


Figure 6: Opinions about the supply of experiences of the ecotourism cluster (First round), (constructed by Á. Fodor)

Hypothesis No 3:

The ecotourism cluster decreases the environmental burden to the smallest possible, which is caused by the tourists in the area of the cluster.

According to the 60 percent of the respondents participated in the Delphi research, the cluster decreases the environmental burden by each tourist. But they did not agree in its extent. (see Figure 7.) Less than 10 percent of the respondents had the opinion that the cluster decreases the environmental burden to a larger extent. On the basis of the expert's opinion the candidate has rejected this hypothesis.

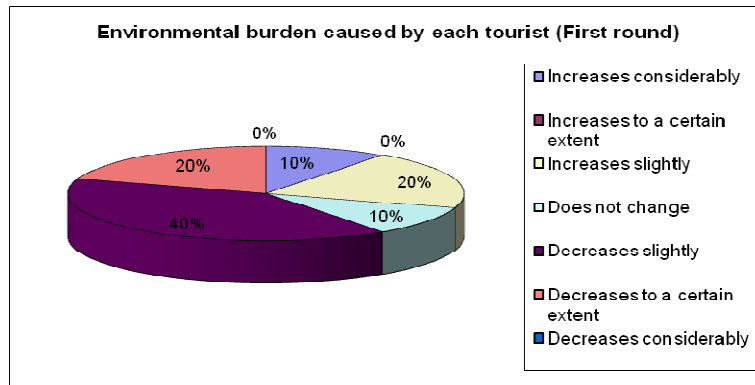


Figure 7: Environmental burden caused by each tourist (First round) (constructed by Á. Fodor)

Hypothesis No 4:

The members of the cluster take into consideration and respect the interests of the nature conservation to the highest extent.

The actors of the potential cluster take into account the nature preservation interests to a certain extent according to the opinion of 70 percent of the respondent experts and they do considerably according to 30 percent of them. *The candidate has rejected the hypothesis, but regarding the opinion of the expert she has modified to as follows:* **The members of the cluster take into consideration and respect the interests of the nature conservation to the extent of sustaining their organisation and the cluster.**

Hypothesis No 5:

The optimal size of an ecotourism cluster: 12-14 participants, which involves 3 or 4 nature conservation actors (NGO, authorities), 4-6 economic actors and 4-6 local governments.

The respondent experts revealed unambiguously, that it is not possible to define the size of an open, voluntary based cluster. Some of the experts drew my attention to define the minimum number of the members. *Pursuant to the above mentioned, the candidate has rejected this hypothesis, and has remodelled it. She has drawn up the following hypothesis, which was confirmed by experts taking part in the testing phase of the research.* **The number of organisations taking part in the cluster depends on the geographical facilities and the supply of programme, but for ensuring the financial resources for the operation minimum 5 member are required.**

- The question of membership involves all stakeholders (investors, enterprises, nature conservation organisations, NGOs, local governments, community), which can be connected to the natural and built environment of the cluster, to the communication of relating values and to the exploitation of tourism possibilities.

- A certain organisation should take part in each cluster, which is responsible for the sustainable development of ecotourism.
- The expedient operational form of a cluster is the association, where the general assembly determines the strategic question and one or two cluster manager is responsible for the operational direction.

IV. CONCLUSIONS

On the basis of the results the Belső-Somogy Ecotourism Cluster may start to be developed.

Next year the candidate is preparing to deepen the study on ecotourism co-operation forms. She intends to implement further case studies in other Eastern-Central-European countries, as well.

Her aim is to monitor the operation of the developing cluster and use the practical information for further research activities.

The New Hungary Development Plan encourages the formulation of clusters, so besides a great number of health tourism cluster a new ecocluster also has been developed in the Western-Transdanubian Region. The aim of the candidate is to observe the operation of these clusters. Regarding the ecocluster she will also study the difference between the theory and the practice.

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