Report on Good sustainability practices in Poland, Hungary, Czech Republic and Slovakia
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Introduction

A review of the literature showed that sustainable development (SD) is generally treated in a holistic manner. There are no studies that analyze only one element of sustainable development. The classical sustainable definition states that SD is "meeting the needs of the present without compromising the ability of future generations to meet their own needs" [Our Common Future 1987]. Generally, the concept of sustainable development is being identified with issues of environmental protection. One should not, however, narrow it. It is worthwhile emphasizing that the respect of the natural environment is only one of his consequences which should be connected with other, not less important issues. It isn't possible to save the environment if at the same time people aren't caring for the respect of the local communities, national laws, democratic principles and involving and forming civil society organizations [Kozakiewicz 2001: 8].

The sustainable development definitions that can be found in the literature are grouped in the three categories. The definitions from the first category are concentrating on natural values and the interrelation between economic and social activity. It is possible to describe it as the natural category. The economic category is underlining the idea of the balance between the business activity and the natural environment that is e.g. adopting new technologies in a production process, determined as "friendly to the environment". And last category - social - understood as the improvement of quality of life for all people. The achievement of the sustainable development goals is taking into account economic, ecological and social conditioning [Madej 2004: 23].

The fundamentals of sustainable development refer to three relations: environment - economy, environment - society, society - economy. An area of the interaction of the economy and social factors is social justice. Quality of life is an area of the interaction of social factors and environment, however, a sustainable development is a term linking the economy with the environment.

Five basic features of sustainable development are [Jacobs 1999: 25-26]:

1. **effectiveness** - ensuring effective usage of all resources (also natural) and including environmental objectives in economic politics;
2. **Justice** - obliging to take at least the essential needs of the current generation into account (but it is also connected with the principle of the intergeneration so-called justice),

3. **The protection of the natural environment and including eco-friendly barriers** - obliging to the natural environment protection and including it in everyday activities (so-called carrying capacities of the biosphere),

4. **Quality of life** - confirming that not only a rise in the gross domestic product affects the quality of life of the society, but also other, often nonmeasurable factors,

5. **Complicity** - confirming that sustainable development requires the commitment and the active involvement of all groups of stakeholders.

In the 21st century three variants of action are possible in the context of the sustainable development idea:

1. Gradual and consistent realization of the sustainable development assumptions predicted for the entire 21st century. At the end of the 21st century, the standard of living would be balanced worldwide, which would guarantee our civilization further harmonious development.

2. Keeping the status quo in the economy and social relations (continuation). It would provoke a rise in the unstable management of natural resources, increase pollution, growing of social tensions, growth of the migration and unstable socio-political situation.

3. Precipitating “processes of the uneven globalization”, deepening of the unstable world economy, environmental degradation, and social inequalities both in countries of the North, as well as between the North and the South countries. It would mean the breakdown of the economy and social relations.

Public and private sector have very important role in reaching SDGs, and can contribute to the achievement of sustainable development, including through the important tool of public-private partnerships. Private sector can engage in responsible business practices, such as those promoted in this Report.
1. Background

The last global action towards sustainable development was accepted by all 193 Member States of the United Nations, by signing the document: *Sustainable Development Goals (SDGs)*. The Agenda determines 17 Sustainable Development Goals and 169 targets associated with them which are supposed to be achieved by the world to 2030. This agreement focuses on achievements in 5 areas - so-called 5P: people, planet, prosperity, peace, and partnership. The goals include a wide range of challenges such as poverty, hunger, health, education, gender equality, climate change, sustainable development, peace, social justice, etc. The SDGs replaced the Millennium Development Goals, which were supposed to be carried out until 2015. Achievement of the goals and tasks is being monitored worldwide with adequate indicators and in most cases, the National Statistical Office is monitoring the indicators for its country.

Accepted by the UN general assembly, the new developmental agenda and seventeen Goals are taking the first step in the aspiration in achieving measurable improvements of billion people worldwide within the next fifteen years.

The new developmental agenda has a universal character and the responsibility for implementation lies with the entire international community: developed countries, developing countries, and international organizations. The private sector and non-governmental organizations will also have an important part in the realization of the Agenda 2030 goals.

Article 21\(^*\) of the Agenda recognizes the responsibility of every country for the realization of the goals, on a regional, national and global level, taking in consideration the level of development and national. In line with the national priorities, each country is expecting to:

- achieve developmental goals on a national level which will be according to Agenda 2030 sustainable development targets;
- provide monitor progress on a country level – choosing indicators, implementing an appropriate system of monitoring and reporting; and
- Building a partnership with a wide circle of stakeholders toward achieving the SDGs.
The new vision of the world development drawn in Agenda 2030 is concentrating on five huge transformation changes, determined as principle 5P (People, Planets, Prosperity, Peace, Partnership). Transformation changes that are expected are:

- **People** - omitting nobody, reaching excluded groups, creating conditions and possibilities of using universal human rights and economic achievements by all people.
- **Planet** - building development model, which will support the economic growth and higher social inclusion, as well as rationally using resources of the natural environment, giving the effect to the better life quality and solving the poverty problem.
- **Prosperity** - transforming economies by opening new employment places and creating inclusive development, with using new technologies and potential of the business, providing access to the good education, health care, and infrastructure.
- **Peace** - building up peace and effective, fair, opened and responsible institutions, guaranteeing to the strengthening the role of the law, social inclusion and the co-deciding, determination, access to the justice, and no discrimination.
- **Partnership** - new global partnership, consisting of solidarity, cooperation, responsibility and transparency of taken action through all stakeholders on both global and local level.

Traditionally viewed through the lens of three core elements—social inclusion, economic growth, and environmental protection—the concept of sustainable development has taken on a richer meaning with the adoption of the 2030 Agenda, which builds upon this traditional approach by adding two critical components: partnership and peace [The 2030 Agenda for Sustainable Development].

The accomplishment the sustainable development idea requires:

1) global protection of the natural environment;

2) solidarities between various countries, especially among the rich and poor, as well as solidarities with future generations;

3) treating economic political, social and ecological factors as dependent on oneself.
2. Good sustainability practices in Poland

Poland took an active part in preparing the Agenda 2030. From the international point of view, the main tool that is going to be implemented by Poland from the SDGs will be the development of cooperation.

Geographical and technical directions of the Polish developmental cooperation action determines *The Long-term Developmental Co-operation Programme 2016-2020*. It means that actions are going to be taken in order to grant developmental help, humanitarian aid and actions in global education for raising the awareness of understanding problems and global interdependences.

Priority actions of the Polish developmental cooperation will promote good management, democracy development, and protection of human rights, human research development, development of entrepreneurship and private sector, as well as promoting sustainable agriculture, development of rural areas and environmental protection. For each of the thematic priorities of the Polish developmental cooperation, results are being monitored and published. Achieving these priorities will contribute to reaching the priority goals. Chosen priorities are matching the seventeen SDGs and their realization will be a Polish contribution into the aspiration to complete the SDGs by 2030.

One of the most important sustainable development goal for Poland is Goal 11 - *Sustainable cities and communities* – make cities and human settlements, safe, resilient and sustainable. Many cities around the world are facing acute challenges in managing rapid urbanization— from ensuring adequate housing and infrastructure to support growing populations, to confronting the environmental impact of urban sprawl, to reducing vulnerability to disasters.

In this Report, good practices in reaching these goals from cities in Poland, especially from Białystok, will be presented. Bellow we present 3 types of good practices: green roofs, water in the city and flowery meadows.
2.1. Green Roofs

Green roofs have been known since ancient times, but only in recent years are achieving popularity. On account of a lot of virtues, mainly ecological, but also social, urban planning, technical and economic, they are becoming an alternative solution not only for buildings of public utility or complexes of commercial buildings but also for traditional, Polish housing estates. Green roofs usually require more effort and financial contribution than the traditional roofing. However, over the years, benefits from having a green roof are compensating for the taken risk and spent time. A good example of a well-developed green roof is the Gardens of the Warsaw University Library, regarded as ones of the most beautiful roof gardens in Europe. A local landscape architect, Irena Bajerska is the initiator of the design, which has diversified colors, forms, and smell.

Covering roof areas with greenery is advantageous very much in many respects: ecological, social, urban planning, technical, as well as economic. Greenery has a beneficial impact mainly to thermal and hydrological properties of the roof and is also improving the quality of air. Additionally, it is improving the permanence of the roof, by protecting it from adverse weather conditions. Greenery is also increasing the fire resistance, as well as is muffling noise. To some extent, it is supporting the biodiversity of a given area, as well as is improving the quality of life. It is recommended to have green spaces and greenery around multi-family buildings, buildings for health care, schools, and kindergartens, because it has a positive effect on the psychological state of people, by bringing a feeling of calmness, peace, and increasing mindfulness, by bringing harmony into the space, reducing the impression of the visual chaos.

Often the biggest disadvantage of green roofs that are being pointed out are the costs associated with their building, the structure, and the maintenance. But on the other hand, this is a perfect solution for flat roofs, appearing on housing estates in Poland. The main advantages of Green Roofs are the improvement of the municipal microclimate and reduction in the effect of the "municipal island of the warmth". Other advantages include:

- improvement in the thermal insulation and the fire resistance of the building;
- increasing retention;
• increasing the surface covered with the flora in the built-up area;
• biodiversity conservation (especially at smaller buildings);
• comparatively little loading the structure;
• improvement in visual advantages;
• increase in the value of the building.

Covering roofs with greenery is very profitable in the case of high-density housing in centers of major cities, where land is particularly expensive. Thanks to green roofs it is possible to develop a large area of the plot because the exploited biologically active area is being compensated. Green roofs are getting more popular in Poland, even though they are being considered as an expensive and impractical solution. This raised the question of how to encourage potential users? Firstly, it is important to have policies that support Green roofs. Municipalities should put the point of covering roofs with greenery in the local law. People are not ready yet to enforce orders associated with green roofs, but tax benefits and partially funding could encourage investors to start building buildings with green roofs more. Secondly, education plays a very important role. There should be an increase in the awareness of the society about the benefit of ecological solutions. Poles intuitively know that green roofs have many positive effects, however, their knowledge is too general, so they are not taking concrete steps, is aimed at implementing this solution in their most immediate environment. And lastly, a good advertisement and marketing campaign will go a long way on this question. Apart from legislation and education, for the development of green roofs fashion could be the next driving force. This phenomenon is supporting popularization untypical solutions. A good example, confirming this principle, is the popularity of lofts.

2.1.1. Library of the Warsaw University (BUW)

The construction of the green roof on the Library of the Warsaw University was the first public investment with non-commercial character in such a great scale, as well as the first so big project of this type in Poland. The main architect of the project is Irena Bajerska, a landscape architect. Today the BUW garden is being regarded as one of the most beautiful roof gardens in Europe. It is stretching out on the surface of 1 ha. The garden is accessible not only for students
and employees of the University but for outside visitors as well, however in determined months and at set times.

*Figure 1: Library of the Warsaw University*


The concept of developing a green roof of the Library of the Warsaw University is based on the infiltrate of a few separate gardens. In each of the gardens, other plant varieties are grouped together, which lets them be divided into categories and be named according to the colors of the plants in each garden. There are the following gardens: yellow, silver, carmine, green, and entrance garden. The gardens enriched by skylights, technical devices, paths, footbridges, small bridges, untypical elements of artificially patinated copper plate, brass and pergolas above passages for pedestrians. The different colors, forms, and smells are giving the composition special nature and are diversifying the space.

In case of beneficial localization on Warsaw Powiśle district, the view from the roof is impressive - it is possible to examine other roofs of Powiśle, panorama of the city center with the Palace of the Culture and Science, the old town and the Kopernik Centre, as well as the right bank of the Vistula river with the towering Cathedral St. Florian and the Bridge. The visitors can admire BUW gardens surrounding the landscape on the roof, a beauty spot that came into existence, so-called little belvedere. Furthermore, through special windows and a glass roof, it is possible to come into the interior of the Library.
2.1.2. The Podlasie Opera and Philharmonic – European Art Centre in Białystok

The new building of the Opera and the Podlasie Philharmonic Orchestra is the biggest object of that kind in the eastern part of Europe. It is not only a center of the culture but also a beauty spot of Białystok. The building has 5 thousand meters and is surrounded by gardens and garden creepers from the outside. The building is integrating perfectly into the landscape of the steeply falling green area. The concept was developed by Warsaw architects: Marek Budzyński, Zbigniew Badowski, and Krystyna Ilmurzyńska.

The gigantic glazed roof in the shape of a flying dish is a crowning pillar. On its peak, it is possible to notice also flowerpots of which weeping willows are growing out. Around the building, there are pavements, amongst which various plants grow - clones, birches, apple trees, and wild roses. There are also three reservoirs being used for irrigation of the greenery which is perfectly fitting to the gardens. Today colourful fish and water plants are living in the reservoirs. Near the ruins of the old amphitheater, a new one was built with a glazed roof.

Figure 2: The Podlasie Opera and Philharmonic – European Art Centre in Białystok - Green Roof

Source: http://www.psdz.pl/content/bia%C5%82ystok-opera-podlaska

The next level of green gardens is the so-called indirect roof. When walking up the stairs it is possible to look into the opera out of the glazed windows called skylight. Here flowery
meadows are spreading. Everything is being watered by the special irrigating installation. From the building, an amazing view of the panorama of the city is spreading out. The garden is in a shape of a circle and is surrounded by trees.

2.1.3.  Green roofs on the Centre for the Meeting of Cultures in Lublin

The green roofs on the Centre for the Meeting of Cultures in Lublin are described as “impressive”. On the 4th floor, an intense roof is located, with planted flowers, bushes and fruit trees. On Drama Square in front of a building, it is possible to see trees from the bottom - apple trees and pear trees growing on this roof. On the 5th floor, it is possible to admire the beautiful flowery meadow. Above the last floor and on the roof of one of the wings of the building extensive green roof sare located.

The total areas of the green roofs is:
- size of the roof on the 4th floor - c 1121 m2
- size of the roof on the 5th floor - c 763 m2
- size of the extensive roof (from stonecrops) - technical roof the highest one - 163 m2

*Figure 3: Green roofs on the Centre for the Meeting of Cultures in Lublin*

*Source: http://zielonainfrastruktura.pl/dachy-zielone-centrum-spotkania-kultur-lublinie/
The architect who designed the building is Bolesław Stelmach. He has called the green roof "flight gardens". His inspiration for the green roofs on the Centre for the Meeting of Cultures in Lublin is coming from combining nature and architecture.

2.2. Water in the City

2.2.1. Rain Gardens

Investing in new ecological solutions is a new trend, which in some cases comes as part of a law legislative, and in other cases is the more practical and economical alternative. Therefore there are more investments which are using rainwater and are increasing the surface waters retention. Increasing the retention of water means increasing the amount or extending the residence time of water in the landscape. Investments increasing the retention allow the rainwater to be sustained and not be carried to canalization at once. Some types of these retention objects are different ponds, small ponds, green roofs and walls which are collecting the rainwater for economic purpose, e.g. for watering plants. Very important aspect of water retention is also a permeable surfaces structure of which water is soaking through the soil.

The water retention in the landscape of cities is extremely important in view of the challenges associated with climate change. In urbanized areas, violent weather phenomena are appearing more and more often, causing urbanized areas to deal with problems of municipal floods and ducking. The current storm drain system, with which rainwater is being carried, doesn't have a sufficient capacity to accumulate large amounts of water in a short time. If fallout is soaking through to groundwaters, it will stay on green areas or in containers and it will be less of a burden to the city sewage system. Furthermore, the water retention in the landscape is has a positive effect on the microclimate, during summertime is contributing to lowering the temperature. Stopping water retention rain in installations enables its reuse. This directly contributes to water saving, which is necessary for many areas of Poland, since the water sources are very limited.
A rain garden can have planted plants in the ground or place container which is eliminating flowing rainwater and it keeps it cleared away from the surface of roads, squares, and roofs. Thanks to rain gardens less water is flowing down from waterproof surfaces (pavements, streets, car parks, squares) and the canalization is less burdened since plants are stopping it in the landscape, increasing the retention of waters into its way. Although rain gardens look like ordinary gardens, they have special plants planted. The roots or rhizomes are stopping water pollutants, e.g. heavy metals and protein-fatty connections. The base of the garden, thanks to appropriately use some sand and gravel, is stopping contained pollutants in the water. Types are three types of rain gardens:

- Gardens in containers - will work in strongly urbanized areas, with waterproof surfaces. It is correcting aesthetics and the microclimate of the place, it is purifying water and it is stopping the water in the landscape;
- gardens in the ground - consists of planting plants in the ground with the increased permeability which are clearing rainwater away from the surface, much bigger than the area of garden;
- Increasing the retention of rainwater - example Campus of the University in Białystok.

*Figure 4: Campus of the University in Białystok – Rain Garden*

(Source: http://www.propertydesign.pl/architektura/104/kampus_uniwersytetu_w_bialymstoku_laczy_nowoczesnosc_z_natura,6636-25484.html)
Around all buildings at the Campus of the University in Białystok there is a flowing small river and inner courtyards of individual departments are also decorating lakes. These are artificial water basins, in which rainwater is being collected, with special systems drained from the roof. It is a so-called network of "dry streams" - water during the rainfall is accumulating in the water basin.

2.2.2. Foundation "I the Vistula" Warsaw (Poland)

The Foundation "I the Vistula" works under the motto "we are introducing people to the river". Through publishing, information and environmental cultural projects, the Foundation is acting not only for the protection of natural reaches of the Vistula and of the natural values of its valley but also on forming of relationship between people living in the city and the river.

The Warsaw part of Vistula River has about 27 km. It is mainly unregulated, forming numerous bends and old river with the rich flora and fauna. Even though it is one of the greatest natural advantages of Warsaw, its recreational potential is unused. Moreover, as a result of the current emission of sewage directly to the channel of the river, there is a decline of the natural environment and biodiversity. At the moment the Vistula isn't an element which builds the identity of the city and the bonds of the residents with the river are weak.

A major action of the Foundation was repairing the old barge so-called "Biscuit", mooring in the Czerniakowski Port - the oldest river port in Warsaw. A registered office of the Foundation "I the Vistula" is located at its deck. It is also a place, in which concerts, workshops, and events are being organized. The foundation is actively seeking revitalization of the Port of Czerniakowski and making friendly public sphere for residents. They want to organize an open-air ethnographic museum for the River Vistula at the port. In 2006 the foundation organized the outdoor exhibition "Vistula which was", presenting 102 reproductions of photographs and paintings of the Warsaw Vistula from the 19th century. It was demonstrated that the river was clean only one hundred years ago, and its coast was accessible and friendly to residents, who were using the beaches, boulevards, and ports.
In the framework of projects "The Vistula heart of Europe", the Foundation is organizing films displaying on the barge in celebration of the Midsummer's Night. Using recreational services is popularizing the river on the municipal beach by the Monument of Sappers. From 2008 during the holiday season, they are offering deckchairs, organising cruises on the Vistula and bicycle expeditions along the river. In 2009 Foundation "I the Vistula" also joined in action in favour of the tagging the nature reserves on Vistula river and monitor areas (Valley of the Centre Vistula and Lesser Poland turning point of the Vistula) in order to counteract the nature destroyed. The Foundation with its actions is trying to attract residents of Warsaw to the Vistula, to build up their bond with the river and a sense of responsibility behind its current state.

2.3. Flowery meadows

Flowery meadows in Białystok will be prepared in 2019-2021 years on roadways and on commune areas, near to the roadways. Every year the total area of planned flowery meadows in the town will take out from 5 up to 6.5 ha. Outlined areas will be planted with traditional varieties of perennial plants, annual plants, and cereal crops. Rape and sunflower fields will appear as well. The Contract with the contractor which is the Warsaw Foundation "Meadow", will be in force for three years - from 1 April 2019 to 15 November 2021. The value of the contract is about 1.6 million PLN (400 000 Euro). As a part of this contract, the foundation will deal with preparing the ground, planting plants, caring, as well as with conservation the plantation.

Białystok will be the forth city in Poland, where flowery meadows already came into existence, among Cracow, Warsaw and Gdańsk. The flowery meadows has a lot of useful benefits. The city is getting more beautiful, clean and friendly for residents.
Apart from these benefits, the meadow are contributing to purify air, they are absorbing more dusts, storing more water than lawns and are simpler in the maintenance. Moreover the meadow forms are natural feeding grounds for insects - e.g. of bees, butterflies and small animals. Educational signs will be accompanying creating flowery meadows in Białystok (placing notices board on specific meadows, as well as houses for dusting insects).

Meadows are a place where thousands of organisms like plants, birds, mammals and insects can live. They are pulsating with life all through the year, and in the summer are charming with colours. Municipal parks are becoming more and more sterile, consist only of equally moving lawns and tall trees, not giving the refuge to animals. The radical arrangement of urban green is preventing the large quantity of species from living, of both insects, and amphibians, birds and small mammals. Untidy squares are a waste of valuable place in the city. Money needed in order to turn the piece of the area into the meadow, are relatively very small. They are similar to costs of lawns preparation, but keeping them is much more economical. Flowery meadows don't require the irrigation, and are usually being mown only once in the year. It is necessary to mow urban
lawns even to twelve times a year, they consume vast quantities of fuel, time, they generate pollutants and noise.

To sum up benefits of green roofs, water in the city and flowery meadows are:

1) Decrease in pollution with the exhaust fumes and the reduction of noise;
2) Significant improvement in the retention and the influence on reinforcing the flood control of the city - particularly through the rain absorption;
3) Making the municipal ecosystem richer by creating conditions for insects (butterflies, bumblebees, beetles, bees), small birds and mammals;
4) Better absorption of air pollutants and production of oxygen;
5) Long lasting impact on the high quality urban greenery irrespective of the weather – for example the natural meadow can withstanding drought;
6) Improvement in aesthetics of the municipal space;
7) Educational value - space for the environmental and natural education for pupils and students; and
8) Cost effective – for example in case of flowery meadow, there is a costs reduction for the care over green area, because it requires mowing once or twice annually. Additionally, there is a relative low costs concerning the planting of the flowers, since the natural life cycle will replenish them with new ones.
3. Good sustainability practices in Hungary

Unfortunately, nowadays the proportion of green areas is decreasing rapidly, but it seems that with cooperation there is hope that even our grandchildren can enjoy the beauty of a park or a green area.

"It is difficult to design a space that will not attract people. What is remarkable is how often this has been accomplished." - William H. Whyte

The words of the American urbanologist, the founder of "Project for Public Spaces", show that public spaces can be built only with the involvement and participation of the people living there, the members of the local community. This opinion becomes more and more accepted in Hungary as well. Grassroot local initiatives and the organizations supporting them, which did not wait for external initiation, had (and still have) a key role in changing the way of thinking about the process of shaping and greening the environment.

3.1. Teleki square

There are some good examples of successful participation planning in Hungary like the renewal of the Teleki Square (8th district of Budapest), where both the designer and the investor had the ambition that the design would be carried out according to this methodology. A new civil society organization (Co-operatives of the Teleki Square Association) was established by local people in the district, which participates in the maintenance and protection of the new space and organizes the programs on the outdoor stage created there.

Located in the 8th district of Budapest, Teleki Square has lived its relative golden age in the 1960s and ‘70s. Since then the state of green space and public safety have deteriorated continuously. In the framework of an urban rehabilitation program launched in 2005 financed by the European Union, the green area of the 14,000 m2 Teleki Square was renewed in 2013. The planning process was an 10-week open workshop series that anyone could join at any time. The people in the neighborhood were invited to take part in the project by posters and leaflets with the
question “What Should Teleki Square Look Like?”, later anyone could comment on the development process online primarily on Facebook on the page dedicated to the project.

Local people were enthusiastic at the public forums, realizing that they could decide for themselves about the future of their environment in a constructive, democratic way. Planning occasions began with professional presentations followed by group discussions with 10-30 people. Controversial issues were decided by voting after discussing the arguments in constructive debates. During the planning process, participants also visited the square several times to be able to imagine the rehabilitation in practice. The most important ideas and plans were put out to the site (stuck on trees) serving as information materials for the passers-by.

During the planning process the participants have explored the history of the square, then analyzed its current state, and mapped the future: how to use the park in the most practical way, in favour of as many age groups as possible, how it can be diverse and inclusive. The principles that formed the basis of the park's concept were that the park should be inclusive, open and diverse; and these principles were kept in mind during all the phases of the process.

The planning process was also a kind of definition of the local people’s vision of their own lives. The process brought together a group of residents, strangers made friendships and are still working together for the common purpose. In the course of the work, a civil society organization was established, which has been involved in the maintenance of the community park since the completion of the square, and is also active in organizing community programs.

An important lesson of this work is that such cooperation can only be successful if the local people see that the professionals are committed and take seriously the importance of participation, and are open to the ideas of others. The designer must have pedagogical and moderator skills to see the common ground in the different perspectives so that the diverse opinions can reach consensus. Without this, it is not possible to conduct a participatory development process accepted by everyone in the group.
3.2. Resolving the weaknesses in green space development and management in Hungary

In the inner districts of Budapest, per capita green area is as little as 1.5 m². This contributes to a situation when particle matter (PM10) and nitrogen-oxide (NOₓ) pollution regularly exceeds limits - prompting an infringement process by the European Commission.

Yet, apart from a few exceptions urban green areas do not have a real owner either at governmental or municipal level as public administration considers them neither part of nature nor part of the built environment, therefore they do not belong either to the institutions and authorities dealing with environmental issues or the ones dealing with the built environment and constructions. In addition, the Hungarian development policy still does not acknowledge that the urban green space is a community space, habitat, place for outdoor recreation, sport and leisure activities, important tool for air and climate protection - they often just treat it as a backup construction area. State and local government budgets tend to cut the resources planned to spend on green space maintenance if they must be redeployed for some reason.

In 2016, Greenpeace Hungary has issued a petition with 5 points addressed to the government to ensure that the Hungarian administration catches up with the more developed Western European and North-American practices.

Proclamation to Protect Urban Green Areas and Green Areas (extract)

We call for the government, Members of Parliament and leaders of the capital city to take urgent action according to the following:

1. Urban green spaces and trees must have the same protection as infrastructure networks!

2. Developments should primarily serve the rehabilitation of neighborhoods in bad condition, and not to burden the city's green spaces!

3. Good owners for urban green spaces! There should be an officer responsible for the maintenance and development of green spaces in all urban municipalities.

4. Priority public investments must not be exempted from environmental protection regulations!
5. Nothing about public parks without local civil society.

Budapest, November 23, 2016

The full text of the proclamation is available [here](https://example.com) (in Hungarian).

As Greenpeace Hungary stated in its [study on urban green spaces](https://example.com) authorities should provide the public with a real consultation and appeal possibility in the case of green spaces and construction sites with large areas of green space as the current practice is unsustainable and results in passive resistance, which can easily lead to aggression as it happened for example in the case of Városliget (City Park) detailed below. To avoid this, it would be necessary to prepare multivariate plans in case of controversial investments already in the early planning phase and make them publicly available with a clear impact assessment and explanation without manipulation. The most effective way of successful public investment is the introduction of participatory methodologies to promote professional and social consensus, to ensure public dialogue and participation. A government should strive for agreement and consensus even before the physical start of investments, and if it is not available, then, according to the will of the majority, it must change its plans.

There have been two recent emblematic cases in Budapest that perfectly demonstrate what happens when the local community is not involved in urban green area development from its beginning: the Városliget (City Park) and the Római Part (Roman Beach). In both cases members of the communities, activists, civil groups have been working voluntarily for years to reduce the damage the planned developments would cause.

### 3.2.1. Városliget - the City Park

Városliget is a 200-year old park in Budapest, one of the oldest city parks in the world, a UNESCO World Heritage Site threatened by proposed plans to create a new museum district on the site.
Figure 6: The original state of the park

The park undoubtedly needs attention to restore its former beauty as in the last decades it did not receive the care it deserved. As an answer to this need the government launched the Liget Budapest Project without any prior consultation with either the local population or civic and professional organizations. The project aims at developing a museum district and cultural centre in the park by destructing large parts of the greenery to make space for the new museum buildings. The Liget Budapest Project would replace more than 1,000 trees in the now tranquil park with 300,000 tons of concrete buildings, destroy a fragile inner-city ecosystem and consequently negatively impact the city’s air quality. No wonder that the proposed plans were quite far from what the community wanted.
Figure 7: The park under construction

According to a Median survey ordered by Greenpeace Hungary in 2016, 86% of citizens in Budapest were not in favour of this plan and these numbers haven’t changed since then. Ordinary people, civil society organizations and groups, professionals and environmentalists have formed a protest group called “Ligetvédők” (“Park Protectors”) with the aim to protest against the government’s plans. They are demanding that the park is renovated without constructing new buildings, since green space in Budapest is already scarce and the museum district could be built in other locations within the city.

Activists intervened for the first time three years ago when construction crews entered the park and began cutting trees in an area designated for the Hungarian House of Music. To protect the endangered trees 24/7, some of the protesters moved in and camped in the park. Instead of hearing the opinion of the professionals and activists, the government acted aggressively against peaceful protesters, criminalizing them, and removed them with security guards who even beat the activists. The situation was exacerbated by the fact that the security guards have been assisted in several cases by the police to act beyond their powers. Court cases have revealed that the protesters have been unlawfully removed from the site in several cases. Eventually the demolition work, including the felling of more trees, resumed.
In some cases the protest was successful: eventually the Transport Museum will be built not in the park but on abandoned industrial area (brownfield), the planned Museum of Architecture will be opened in a closed hospital building and the Museum of Photography will also be built outside of the park. Activists are constantly documenting the offenses and initiate legal action - without them looting would take place twice as fast. The Liget Protectors managed to protect the oldest trees from mutilation that would have been caused by the preparations for the Swimming World Cup in 2018. The Budapest’s local government “Ten Thousand New Trees to Budapest!” program would not have been created without the Liget protection movement either.

According to their “Constitution” the Ligetvédelmek are self-organized, party-free, independent individuals, operating on a voluntary basis, following the principles of nonviolence. Their goal is to make decisions about society preceded by real, broad social consultation and a consensus-based decision. They also declare to preserve the natural and cultural values. Their principle is that everyone is equal: everyone in the movement has the right to participate and vote until it complies with the Constitution. Their operation is based on participatory democracy, having no leader and no main organizer, shaping the processes together. Anyone can join them: their decision-making body is the plenary, and their meetings are held at a pre-announced time and place. They state that their conscience can question the written legal system, so they consider civil disobedience as an appropriate tool to achieve their goals.

*Figure 8: Activists*

Source: Ligetvédők
Attempts to hold a referendum about construction plans in the park were precluded by the government, making it difficult for citizens to voice their concerns, but activists continue protesting in the park and in their online interfaces - their website and their Facebook, Twitter and Instagram pages and Youtube channel - and in the media.

3.2.2. Római Part - Roman Beach

Although the Danube crosses the whole city the Római Part is basically the last natural connection between the city and the river, the only place in Budapest where the people have the possibility to enjoy the riverside as most of it is built in by roads and harbors. The Római is located at an approximately 5 kilometers long stretch along the Danube riverside of the city's North-Western 3rd district, Óbuda-Békásmegyer. It is outside of the city’s tourist attractions but it has a special atmosphere and therefore loved by inhabitants as a local recreational area, natural reserve - part of the Natura2000 network -, and water sports, primarily boating such as kayak and canoeing facility since the 19th century.

The promenade with numerous open air restaurants and bars, lined by beautiful trees is a popular destination among runners and cyclists and a popular walking area for families with children and dogs although it is in quite a bad shape now, and should be renewed with flood-resistant furniture, public spaces, playgrounds, toilets, cycling paths, using planning solutions which help the peaceful co-existence of the different users (pedestrians, children, cyclists, rowers, etc.).
The Római Part and streets of the 3rd district's residential area that lie nearby were flooded by the river several times in the past. To protect the area, in 2013, the Budapest city council decided to order the construction of a mobile dam at the Római Part. Ever since then there has been a long debate about the appropriate type and location of the planned dam. Inhabitants and local organizations criticize the plans as they doubt the benefits and effectiveness of this specific type of flood protection.

The biggest problem of the current mobile dam plan is that its building would make it necessary to cut down approximately 1,500 trees on the shoreline in order to avoid the danger of fallout, and result in an environmental disaster for the wildlife of the area. The edges of the banks would be paved with stone like in the inner parts of Budapest, thus the gravel would be removed and the lively fauna perish. The Római, as locals know and like it, would disappear together with the trees.

Another problem is that this solution wouldn’t give full protection for the 55,000 inhabitants of the area as the soil conditions on the riverside would lead to only a fragile flood protection and endanger the entire neighborhood in case of breach during a flood. The area behind the dam would become swampy because the mobile wall could reach up to 4 meters, which
requires two-three times as deep ferroconcrete foundation on the whole 3 kilometres long riverside section. This underground wall would cut the underground water streams coming from the hills at a depth of 6-8 meters, which would result in swappiness on the protected side of the wall.

Experience shows that all of Budapest is threatened by more frequent and intense floods, which is linked to climate change, the artificial narrowing of river floodplains, the reduction of the riverside’s green areas, the growth of paved, fast-running areas with low water retention capacity, clear-cutting of forests and soil erosion in the mountainous areas. If Budapest continues to narrow its floodplains with investments like the Római Part, then both the level and frequency of floods will increase, and the decision-makers will act against the EU Floods Directive.

Local people and 58% of the population of Budapest (according to a research conducted by the Závecz Research in 2017 ordered by Greenpeace Hungary) support the development of a centralized process of flood protection at the banks, which protects the area against the middle-range floods happening in every 5 to 10 years and which does not damage the environment. Local activists and many professionals suggest to construct the new dam further away from the embankment along Nánási street and Királyok street, that has been a secure solution for decades. This would be a more secure, more rational and much cheaper solution than the mobile dam.

*Figure 10: Local population on Roman Beach*

Source: Maradjanak a FÁK a Rómain
Therefore, local people are represented by several civil society organizations and groups joined together in the Maradjanak a FÁK a Rómain (Save the Trees on the Roman Beach!) campaign that was founded in 2013 by the Valyo, Város és Folyó Egyesület (City and River Association), when the destructive and risky plans were published by the city council. The number of the followers of the Maradjanak a FÁK a Rómain facebook group has grown over thousands of people and a number of civil society organizations joined their work too: the KÉK - Contemporary Architecture Center, the Hungarian Association of Landscape Architects, Protect the Future and other smaller groups. In March 2013, the group organized a demonstration of 2,000 people in the Római, which contributed to stopping the implementation of the proposed plans. In 2016, the dam was again put on the agenda. The campaign group was reconvened, and they involved the total population of 55,000 using the Római and affected directly by flood protection. In October 2016, this diverse team organized the demonstration of about 3,000 people protesting for a safe and environmentally friendly alternative of the dam. Besides organising demonstrations the members of the group has also collected more than 10,000 signatures and launched facebook groups.

According to critics the only people interested in and benefiting from the construction of the mobile dam are those who own real estates, villas and resorts - partly constructed illegally in the past decades - between the Danube and the Nánási street, directly in the floodplain of the river. They have an stake in higher property values through the complete flood protection of the neighborhood.

As a consequence of the debate and widespread opposition against the city council plans, the implementation of the dam construction works is still pending, and alternative solutions are still in discussion, but it is more and more hopeful that the mobile dam in its original form will not be built and the trees in Római Part can still be saved.

3.3. Greenbelt Program

Ökotárs Foundation launched a unique environmental program in 2006, with the aim to help communities create more and more beautiful green spaces and at the same time make these communities stronger and and more environmentally aware. For more than a decade, the program was supported by the MOL company, and since 2018, by other donations on a smaller scale.
Hungarian civil society organizations which represent local communities may apply for support, with a minimum of 1500m2 of green space to be created or renewed. Another basic condition is that the area must be open and accessible to everyone. Since 2012, communities of condominiums in Budapest could also apply to the program, and from 2014 onwards community gardens were supported, too. Besides tree planting, the program also covers the costs of cleaning up public spaces, setting up or renovating selective waste bins, as well as place bike storages, benches, tables, sculptures.

Applicants received grants of a few hundred thousand forints (app. 1500 € on average), and 20% of the total program costs had to be provided as own contribution, but in our experience, communities were able to mobilize two or three times bigger additional sources through mobilizing local resources.

The program supports the planting of indigenous plants only, and it is expected that implementation is carried out in an environmentally friendly manner and in the framework of community action with the involvement of the population of the settlement, the local government, local entrepreneurs and institutions. The goal is to encourage the participation of the whole community, including schoolchildren to work in the projects, teaching them how to protect their environment and to appreciate the fruits of their work every day in a nice park or playground. Of course, the creation of a green space is not only hard physical work, but a relaxing entertainment, because while the little and big ones are busy, the delicious food is being prepared, and you can hear pleasant music from the background. This is how this program not only focuses on our environment, but also brings communities together.

The success of the program is well-demonstrated by the fact that over the past 12 years, local organizations and the public have created hundreds of thousands of square meters of wonderful green space with enormous enthusiasm and mutual support, with the voluntary work or support of municipalities, schools and other local businesses and organizations. It has also been proven that not only money matters, as the success and long-term impact of the programs did not depend on the amount of money received but rather on the close co-operation of the participants, mutual support, and the local organizations’ and people’s enthusiasm, integrity and faith. Since 2005, 338 grantees have planted 117,000 trees, shrubs and flowers, on 1,820,000 square meters, with the involvement of nearly 30,000 volunteers.
The application procedure usually had two rounds:

In the first round, applicants submitted an idea presenting the area and the way the local community would be involved in planning the greening and transformation of the space. The selected applicants could plan the final landscaping with the involvement of the local community and experts, and submit it during the second round. The winners of the second round received support to implement their program.

Applicants selected to the second round could take part in a one-day training session with a brief overview of the method of community planning. This was based on the book "How to Recreate a Public Space?" which all participants receive after the training. The publication is basically a translation of the American Guide for Public Spaces and its adaptation to the country, which has been specifically addressed to help people conduct their own community planning process. Some Hungarian case studies are also available in the Hungarian edition.
The success of the program is also proven by the fact that the renewed green surfaces have become real community sites and are regularly visited by residents. According to the reports the awareness and cohesion of the local communities increased significantly as a result of the program, thus nearly 700 other community-related community events happened in the settlements. The intention of the Green Belt program was to increase the environmental awareness and knowledge of the population as well as the appreciation of environmental values beyond the renewal of green surfaces. The goal has been clearly achieved, as applicants have reported that the program has made communities much more aware.

**Community Park in Nyim**

The aim of the program of the Nyim Cultural and Tradition Association was to create a small park surrounded by indigenous trees and shrubs, that is suitable for sports, cooking, roasting bacon, walking and relaxing. Their goals were successful: during three occasions, with the active participation of the local population and the help of over 80 volunteers they planted native trees and shrubs and flowers. They built a petanque and a bowling track, an open fireplace and benches, a table, a selective waste bin and a small wooden bridge as well. Following the finishing of the last works the new co-developed area has indeed become a community space by a competition for children (bowling) and another for adults (petanque). The cohesive power of the community has been further strengthened by the placement of messages for the future generations put in a time capsule by the participants.

Grant amount: 600 000 Ft (1870 EUR)

3.4. Tree of the Year

The aim of the Tree of the Year contest is to strengthen the relationship between people and trees and to raise awareness to the natural and cultural value of trees.
About the European Tree of the Year contest

The European Tree of the Year contest (ETY) originated in 2011. It was inspired by the popular Tree of the Year contest, which has been organised in the Czech Republic by the Czech Environmental Partnership Foundation since 2002.

The European round is a finale consisting of the winners of the national rounds. Every year, the online voting for the European Tree of the Year is organized by Environmental Partnership Association (EPA), of which the Hungarian Environmental Partnership Foundation is a member.

The first European voting was organized in 2011. Since then the number of countries involved in the contest has risen from 5 (Bulgaria, Czech Republic, Hungary, Romania, Slovakia) to 15. We are helping to establish the contest in countries outside of Europe now.

The primary target groups are the local communities - civil society organizations, neighborhoods, schools, etc. - who care about green areas in their settlement and nominate their favourite trees in the competition. The indirect target group is the general public, who participate in the game in some form, such as a voter or a promoter in their circles or in the social media.

The voting period starts on the 1st of February every year and ends on the 28th. Everyone can vote for two trees. In the last week of the voting period the number of the votes is not public. The results and the winner of the contest, is unveiled in the award ceremony organised in Brussels in mid-March with the attendance of the nominators, organizers of the national contests, Brussels environmental stakeholders, supporters and media. The award ceremony is organised by the Environmental Partnership Association and the European Landowners’ Organisation, with support from the South Moravian Region, Mendel University in Brno and the S&D group from European Parliament.

The www.treeoftheyear.org website has 420 thousand unique visitors a year and the contest has 31,000 Facebook fans.
About the Hungarian Tree of the Year contest

The Hungarian Environmental Partnership Foundation (Ökotárs Foundation) organized the Hungarian Tree of the Year contest in 2010 for the first time with the aim of drawing attention to the trees in our immediate environment and the importance of nature and the role they play in our daily lives.

Anyone can nominate a unique individual tree or a group of trees in the competition with a story that explains why the tree is important to the community between the 21th of March and the 22nd of April. The age, beauty and size of the tree are not important, however it’s a advantage, if it is indigenous, stands in public space or its history is related to an environmental case. The goal is to activate communities and support active communities. Nominations are accepted online through the Év Fája (Tree of the Year in Hungarian) website by submitting the name, species, height, GPS data, photos and most importantly the story of the tree.

From the trees nominated in the competition, the jury of Ökotárs Foundation chooses 12-15 finalists each year and the online voting decides which of them will receive the Tree of the Year Award. The jury also selects the Hero Tree - this recognition is about trees whose lives are in danger and for which their community actively work to save them. The contest’s official partner, the National Forestry Association also selects a tree from the nominees that wins the Association's special award. In 2018 we accepted 35 nominees from all of the regions of Hungary and 12 were selected by the Jury.

The voting period starts in July every year and ends at the end of October. The number of the votes is hidden in the last week of the voting period just like in the European contest. Everyone can vote for one tree. In 2018 more than 16,000 people voted for their favourites.
The award ceremony is usually organized at the end of October with the attendance of the nominators, organizers, supporters and journalists. The winners are awarded with a health check and health care treatment for the tree, plates, diplomas and bird nests.

The Hungarian Tree of the Year is automatically nominated to the European Tree of the Year contest every year. In its 9 year old history the European contest was won by the Hungarian tree 4 times: in 2012, 2013, 2016 and 2019.

**Campaigning - case study**

In 2018 Zengővárkony's survivor, the sweet chestnut nominated by the Foundation for Pécsvárad won the Hungarian contest and finished fourth in the European. How they did it?

At the beginning the foundation only aimed at nominating a tree from the local sweet chestnut-wood because of its special history and the significant role it played in the community’s past. Eventually they decided to choose not the most beautiful, biggest or oldest tree, but the one that with the most unique story: this particular tree - besides the difficulties experienced by the whole wood (diseases, etc.) - also survived once that it was set on fire. Luckily this tree was also the best for making photos and videos which are the most important elements of the campaign. Its location is also perfect - although it stands on a private land, at the same time it is on the route of Hungary’s longest and most important hiking trail and can be visited by anyone.
Source: Éva Kutas

All 400 people living in Zengővárkony village, but also the 4000 inhabitants of nearby Pécsvárad town were enthusiastic during the whole campaign, and both municipalities supported the tree. Four people were part of the organizing team and each of them spent one-two hours a day with working on the campaign during the voting period. One of them used rather his personal connections, while the other three were more involved in the online communication.

In the Hungarian contest the campaign team had no financial support, they paid Facebook advertisements from their own pockets, but for the European campaign the municipalities and a couple of local businesses contributed 880 EUR that made it possible to produce a professional video and to pay for Facebook ads. The nominators considered the videos to be most important tools of the campaign as they reached more people with them than with anything else. The second video produced by professionals reached 50% more views than the first one made by volunteers which means that even if there is no financial support it’s possible to make a successful video.

80% of the campaign ran on Facebook. In the first part the nominators used their own and the municipalities’ channels. Later they involved the county and nationwide media too. In the second part they also involved other communities such as schools, universities, civil society organizations and at the end celebrities as well. They also used Instagram but it was a bit less effective than Facebook. They pointed out that it’s also important not to overdo the campaign to avoid the danger of boring the people.

As a result of the campaigns the tree not only won the Hungarian contest and had the fourth place in the European one, but they also activated several communities and made the sweet chestnut wood and its story popular in its narrower and wider environment as well.

In 2018 Ökotárs Foundation put even more emphasis on the community involvement aspect than in the previous years. The success of the tree always depends on the mobilizing capacities of the nominators, although through its own means Ökotárs also promotes voting, especially in the media. Particularly in medium-to-small settlements (for example, three years ago in Bátaszék) the whole population was active in the campaign. We aim to make better use of these energies and
maintain them in order to protect the urban green spaces. Therefore we organized a one-day workshop for the nominators in order to teach them use the basic methods and tools of community involvement and communication.

We also want to use the popularity of the contest to put more emphasis on action to protect green spaces, that unfortunately is a problem not limited to Budapest. We communicate that voting and taking part of the Tree of the Year contest is important but not enough in order to protect green areas. Using our cooperation with Greenpeace Hungary we share tools and ideas regarding tree planting and rescuing, joint actions, cooperation with local governments. We also follow up and communicate the results and news regarding these joint actions through our online platforms (the Év Fája facebook page has 4600, the Ökotárs Alapítvány page has 2800 followers) and the media. As a result our goal is to improve the contest’s community building and action generating aspects - besides the awareness raising.

<table>
<thead>
<tr>
<th>The winner of the Hungarian Tree of the Year 2018 and European Tree of the Year 2019 contests</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Almond Tree of the Snowy Hill in Pécs - Symbol of eternal renewal</td>
</tr>
<tr>
<td>Species: almond tree (prunus dulcis)</td>
</tr>
<tr>
<td>Age: 135 years</td>
</tr>
<tr>
<td>Region: Pécs city, Baranya county, Hungary</td>
</tr>
</tbody>
</table>
The almond tree in front of the Church of Our Lady of the Snow has been delighting its visitors for 135 years. The almond blossoming has been a symbol of eternal renewal and education since Bishop Janus Pannonius wrote his poem about an almond tree in 1466. Standing on white rocks, defying the winds, this old tree was already being mentioned with love 100 years ago, and the wonderful panorama of the magical landscape and the imprint of the historical ages has astonished many more since.
**Hero trees 2018**

Trees on the Roman beach  
Species: various  
Age: 40-50 years  
Region: Budapest, Hungary

There are about 1500-2000 trees on the 3.2 km section of the Roman beach, providing a unique environment for relaxation and sports in the city; habitat for many bird species, and the floodplain forest is a hunting ground for beavers; shade and cool air in the summer. The hero trees of the Roman beach are not simply trees. They have become symbols of safe flood protection for 55,000 people living in the bay because the mobile flood protection wall is risky; they have become symbols of the preservation of the current recreational function of the floodplain, as if the dam is built on the shore, the current boathouses will be dismantled and the floodplain will be filled with residential complexes.

Source: Város és Folyó Egyesület (VALYO)
4. Good sustainability practices in Czech Republic

There is many examples and good practices both for local sustainable development, and also national and regional initiatives, which can be shared with Balkan and other countries. Many of them started as bottom up initiative of NGOs and ended up as tool for sustainable development.

Typical example is the Greenways program initiated by the Prague Vienna Greenway Association in mid nineties and later developed by Environmental Partnership Association into regional tourist product based on local heritage protection:

<table>
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<tr>
<th>What Greenways mean to us?</th>
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<tbody>
<tr>
<td>“At a time when people across the globe are struggling to maintain the uniqueness of the places they live, Greenways present an exciting way to enhance the quality of life, to increase opportunities for recreation, and to conserve fragile natural resources. Greenways are paths and green corridors in rural and urban areas that serve a number of functions: at a local level, they can be important biocorridors and provide opportunities for recreation and nonmotorized transportation; at the regional level, Greenways can connect points of interest and create a special product for sustainable tourism. Greenways promote local and regional identity; they provide a focus for cooperation between a wide range of different partners, both at the local and regional level; and they foster protection of natural and cultural heritage as well as sustainable development.”</td>
</tr>
</tbody>
</table>

Central European Greenways
4.1. Greenways Prague – Vienna

The Prague-Vienna Greenways is a network of 100-year-old hiking trails between Prague and Vienna. Travelers can walk or bike between historic towns and villages, visit romantic castles, medieval churches and monasteries, discover old Jewish sites and savor some of the most picturesque countryside in Europe.

The routes stretch 250 miles along the Dyje River Valley in Southern Moravia and the Vltava River Valley in Southern Bohemia, the settings of numerous folk and music festivals. It was established in 1997.

This oldest and most popular Greenway in the Czech lands has pioneered cooperation between nonprofit and commercial activities. Key partners in developing and promoting the route are the Civic Association Prague-Vienna Greenway, the Greenways Program of the Czech Environmental Partnership foundation, the American Friends of the Czech Greenways, as well as the Greenways Travel Club, a commercial tour operator. An important feature of the greenways approach is what we call people-to-people tourism. Besides the chance to hike and bike through picturesque landscapes, visit baroque palaces, and stop off at wine cellars, tourists travelling along the Prague-Vienna Greenway have the opportunity to get to know a number of not-for-profit initiatives focused on historical and cultural preservation as well as people working on them. The Greenways Travel Club provides 12% of its income (not profits!) from tourism along the route to support nonprofit initiatives participating in the program.

Prague-Vienna Greenways combines initiatives and activities of more than 30 NGO’s in the corridor of this trail. Last year a new project supported by EU cross-border-coppperation project Phare CBC and by the Greenways Travel Club was launched which is aiming at the strengthening of non-profit activities along the trail, community development and strengthening of their cultural identity, cooperation between local communities, civic initiatives, business and state organizations, protection of cultural and natural heritage, improvement of tourism infrastructure.
and support for sustainable tourism together with creation of conditions for economic prosperity based on sustainable use of local resource in general.

Currently the Greenway is being extended to Hluboká n/V, České Budějovice, Český Krumlov (under UNESCO protection), Nové Hrady mountains and Třeboň. New loops like the Greenway of crafts and religions are being added to increase the attractiveness of this Greenway. The whole Greenway will be signposted by one logo with color variations for the loops and equipped by amenities including detailed maps, picnic areas etc.

4.2. The Moravian Wine Trails

This Greenway project serves 300 communities in Southern Moravia. The project's aim is to seek a favorable balance between the preservation of traditional culture, nature, and landscape, and the usage of these areas for tourism. In practice, this means awakening and nurturing local appreciation for a shared cultural and historical heritage and creating in people a sense of a common vision for the region that can become reality. Therefore, we can also state that one of the project's aims is to try to create a broad regional partnership of communities, businesses, state authorities, and non-governmental organizations. The project is based on 5 pillars:

1. Landscape stewardship – improving local system of ecological stability (e.g., trees are needed in Southern Moravia)
2. Heritage conservation – mostly vine cellars, need of reconstruction, weak local commitment
3. Development of sustainable tourism – e.g., locals could sell their product to tourists
4. Improvement of products and services of small vintners
5. Education, training – improving human resources is a goal connected to all the other pillars

The financing of the project is based on state funds and EU funds. This project became well known among tourists and wine connoisseurs through the slogan „1.000 km bike paths through gardens and vineyards of Southern Moravia“.

Facts about Moravian Wine Trails project:
• Length of the trails 1.090 km
• Number of communities involved: 280
• Number of wine growing regions linked: 10
• Estimated annual number of visitors: 250,000 in 2000, over a million in 2018.

In the beginning the project was focusing on preservation of historic wine cellars and wine lanes which is done in cooperation with Austrian colleagues. Community run wine shops are also being developed along these trails. The trails are also being linked with a similar system of trails in Austria.

Today the networks and services are developed, and the EP Foundation helps to bring tourists and to improve quality of services.

4.3. Amber Trail Greenways - Linking Nature, Tradition and People

The route of this Greenways is Budapest (H) - Banska Stiavnica (SK) - Cracow (PL). An ancient route used for transporting amber from the Baltic to the Adriatic Sea, pioneered by the Celts and developed during the times of the Roman Empire.

Today, the Amber Trail Greenways program, under the umbrella of the Central European Greenways, brings together people of Hungary, Slovakia and Poland working together to create a network of local and cross-border partnerships of civic, business, and governmental organizations, supporting community-based initiatives to preserve and restore trails and natural corridors, and thus contributing to development of sustainable economy across Central and Eastern Europe.

Amber Trail Greenway (ATG) is an international initiative linking the most valuable natural and cultural treasures and local initiatives along a corridor joining Budapest in Hungary, Banska Stiavnica in Slovakia and Krakow in Poland. Program is developed by three independent foundations operating in Poland (Fundacja Partnerstwo dla Środowiska), Slovakia (Nadacia
Ekopolis) and Hungary (Okotars Alapitvany), which together with the Czech Nadace Partnerstvi and the Romanian Environmental Partnership make up the Environmental Partnership for Central Europe (EPCE) Consortium.

The mission of the ATG to initiate, add value and promote wide range of local sustainable development activities based on local natural and cultural assets located along the historic heritage route through:

1. development of environmentally-friendly tourism, creation of the Amber heritage trail;
2. support and promotion of local products and local production through marketing assistance and network of fairs;
3. strengthening local initiatives connected to the above aims, local leadership and enterprise;
4. linking people and their ideas;

The ATG resonates with the numerous roles played by trade routes in earlier times -- economic, communication, religious, military, diplomacy, cultural exchange and social interaction. Trade relations were always accompanied by exchange of information for building local understanding about the wider world in terms of social, intellectual, religious, cultural and economic issues. For centuries, merchants traveled along the ancient Amber Trail exchanging goods and ideas. These precious commodities linked people of different nations and cultures. Today, a new Amber Trail Greenway connects heritage places and environmental initiatives in Poland, Slovakia and Hungary of revitalized Central Europe.
4.4. **KRAKOW-MORAVIA-VIENNA Greenways**

Vienna-Krakow Greenway is an initiative of Czech and Polish Environmental Partnership Foundations developed in 2001 aiming at:
1. creating new tourism product bridging interesting historic regions of Central Europe of high natural and cultural value;
2. bringing together people and regions stretching from Lower Austria, through Moravia, Silesia of Tesin/Cieszyn at the Czech/Polish border, Silesia and Little Poland;
3. fostering local environmental initiative along the natural historical corridor.

Vienna-Krakow Greenway links:
Vienna - **Czech Republic:** Brno - Mikulov - Moravian Jura Upland - Olomouc - Lipnik - Helfstyn - Stary Jicin - Novy Jicin - Hukvaldy - Cesky Tesin - **Poland:** Cieszyn - Skoczow - Ustron - Bielsko Biala - Pszczyna - Oswiecim - Alwernia - Krakow Jura Upland - Krakow.

What distinguishes Vienna-Krakow Greenway?

1. „Adopt the tree” project directed to local communities, companies along the trail and prospect tourists - growing up fruit trees along the greenway.
2. Traditions of small breweries and beer production along the trail (famous centres of beer production in Brno, Prerov, Cieszyn, Zywiec, Tychy, etc.).
3. Historical places and memories of CK Austria - which are in fashion nowadays - historical places and events related to the Franc Jozef, art, architecture, kitchen of that times, train travelling from Vienna to Krakow in 4-5 hours, etc.
4. Clean Business Program addressed to small and medium tourism enterprises (SMEs) - involving small entrepreneurs into the project, upgrading the quality of their services and improving environmental action of SMEs.

Vienna-Krakow Greenway belongs to the “Central European Greenways” family – program of the Environmental Partnership for Central Europe (EPCE) Consortium.

**4.5. The Iron Curtain Greenway – EUROVELO 13**

The longest Greenway in the region (10,400 km), following former Iron curtain from the Baltic see going down to Black see. This Greenway has great tourist potential and is developed by group of European partners. EuroVelo 13 retraces this ‘Iron Curtain’, a border stretching from the Barents Sea to the Black Sea. Following this route for more than 10,400 km is a living history lesson but also provides a welcome reminder of the peace and reconciliation that have followed the fall of the ‘Curtain’.
Figure 13: Map of the Iron Curtain Greenway

Source: www.greenways.cz
4.6. CYCLIST WELCOME

The certification Cyclist welcome has been developed in 2004 as a tool for improving services for cyclists in tourist destinations and is the services, such as hotels, restaurants, B@B, castles, info centres, etc. After initial support from the EU funds, the project is selfsustainable today and offers database of app. 900 facilities in 2019.

4.7. OTHER TREE PLANTING PROJECTS

Planting trees is becoming more important now, when facing growing challenge of climate change. The Nadace Partnerství has run extremely successful campaign Trees of Liberty in 2018 at the opportunity of 100 years anniversary of the Czechoslovakia ( million trees - one for each citizen of the countr)).

Trees of Liberty symbolize the rise of Czechoslovakia. In the years 1918 and 1919 the people planted thousands of them. The mayors, pupils, and members of local associations participated in the planting. The trees were covered with ribbons, houses were decorated, an anthem was sung, and a list of memories was laid on the roots. The trees were also planted in later years (1928, 1945, and 1968) whenever people wanted to commemorate and celebrate the importance of liberty and democracy.

To celebrate the 100th anniversary of our republic, we will organize an event similar to those in the past where we will discover the long-forgotten Trees of Liberty, give them professional care, and plant new trees with your help. Great success of the Trees of Liberty campaign inspired the Environmental Partnership to transform it into a long term initiative aiming to plant 10 million trees within next five years. The name of the initiative powered by the consortium of partners and by strong communication campaign is www.sazimebudoucnost.cz (We Plant Our Future). The initiative is a part of the program how to increase resiliency of the cities and agricultural landscape towards climate change.
4.8. CLIMATE ADAPTATIONS, SMART TECHNOLOGIES

The Environmental Partnership has a long term experience in implementing and practical testing of green and blue infrastructure, smart buildings and use of smart technologies. We have developed zero carbon property in the historic centre of the City of Brno. We do long term monitoring of energy and water balance, including measurements how efficient are different types of the green roofs for rain water retention, and for cooling the microclimate in cities.

*Figure 14: Open garden*

Based on our experience with the efficiency of the green roofs for climate adaptations, the City of Brno is opening motivation program of subsidies to build the green roof for owners of buildings in the city.

Source: [https://www.nadacepartnerstvi.cz/Home](https://www.nadacepartnerstvi.cz/Home)
5. Good sustainability practices in Slovakia

The Slovak Republic has overcome a long journey since the beginning of its environmental strategy. The ecological situation was not in focus for several decades. Fortunately, the case has changed after The United Nations Conference on Environment and Development (UNCED), also known as the Rio de Janeiro Earth Summit(1992), where Slovakia has adopted Agenda 21(the Government of the Slovak Republic, p. 13). Currently, Slovakia is accomplishing the goals of the 2030 agenda introduced by UN, dealing with sustainable development goals(MŽPSR 1993, p.4-6) (European Environment Agency. 2015). On European level was held the 6th conference of ministers of the environment, which defined priorities and tasks needed to be done to improve the current environmental situation. International commitments are supported by Programme announcement of the Slovak Nation Council.( MŽPSR 2017, p. 3)

Moreover, an Action plan for environment and health of inhabitants of the Slovak Republic(NEHAP V.) was introduced. The World Health Organization’s definition of health is “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” The rate of deaths caused by environmental defects is at a high level all around the globe. According to the survey conducted by The World Health Organization in Slovakia, 16% of all the deaths in the Slovak Republic is caused by environmental issues. The primary goal of this action plan is to minimalise the number of deaths caused by the influence of the environment (MŽPSR 2017, p. 4) (8fit, 2019).

5.1. Greeen Slovakia

Slovak Republic intends to support the environment, which is done via the Ministry of Environment or by a variety of initiatives supported by the ministry of the environment. Greeen Slovakia- is Slovak initiative with the primary aim to apply strategic documents. Three “e” in the name of the initiative means effectivity, ecology and education. Slovakia wants to support environmental projects, activities of the non-governmental organisations in order to create possibilities to influence the ecological situation in Slovakia for everyone. (MŽPSR 2016, p. 3)
Besides the official part, in the normal life the things connected with ecology has become a trend, and we can observe people’s increasing interests in the topics anyhow connected with the environment.

5.2. **Apus & Nyctalus**

With the help of this project thousands of nest boxes to welcome swifts and bats back to cities in Slovakia were installed, where the former nesting sites were unreachable when the building were renovated, in order to by improvements to the energy efficiency of old buildings.

The APUS & NYCTALUS project aimed to increase the populations of swift in Slovakia. The number of nesting sites for populations of swifts as well as other bird species increased in 417 sites across the country. Around 2,400 boxes for swifts and 800 boxes for bats were installed. Likewise, the number of roosting sites for bats per square kilometre was enlarged in 16 sites in all eight regional capitals. Furthermore, the occupancy of the boxes was recorded to have increased in the last year of the project. To ensure reliability the boxes will be monitored for the next 5 years. During the project a detailed database was created. Around 14,400 plastic grids for ventilation shafts were modified and as a result of the project new legislative regulation was adopted. The new legislation obliges expert surveys to be carried out on conservation of nesting and roosting sites of birds and bats, before installing thermal insulation or renovating buildings in Slovakia. This is a good practice that has proved to be successful in Slovakia and can be applied in other non-EU countries, especially those with similar urban architecture like North Macedonia. Some municipalities have already accepted and successfully applied principles of the protection of swifts and bats in buildings with support from their own budgets. Some of these municipalities are Bratislava-Karlovka Ves and Púchov.

The project represents a replicable example of protection of species that are not sufficiently protected by national and EU legislation. With this example, there is a coordinated, comprehensive and systematic approach to a specific conservation issue. Following the good practice, Bulgarian authorities asked for some of the project’s outcomes (catalogue of model solutions, technical manual) for application in Bulgaria. Furthermore, the project’s approach brings together partners
with different backgrounds and expertise, namely NGOs focused on protection of birds and bats, public authorities dealing with environment and constructions, the business sector represented by construction companies, architects and managers of buildings (i.e. owners). More than 345 stakeholders, including decision makers and environmental specialists, received training on implementing principles of protection of birds and bats in buildings. This was very important for ensuring sustainability of the project, because these experts and decision makers are part of the process of issuing construction permits, where these principles will be included. Another benefit from the project is significant raise in public awareness about the target species. The project’s actions also contribute to the EU 2020 Biodiversity Strategy and 7th EU Environment Act.

Furthermore, the project created 25 new jobs out of which 13 were full-time jobs. As the project develops, other new jobs are arising based on the demand for services, expertise and the implementation of conservation measures. It is expected that the project achievements will be protected through the implementation of the ‘Guideline on protection of birds and bats in buildings’ and the ‘Act on Nature and Landscape Protection’, which includes articles related to the topic. Also the ‘Operation Programme Quality of Environment’ contains measures for protecting nesting and roosting sites on public buildings. This project has been the winner case study of the CEEweb Award 2014 in the "Green Infrastructure and restoration, and their tangible benefits" category.

5.3. Project for using renewable sources of energy

The SMAPUDE LIFE project focused on changing to renewable sources of energy in buildings all around Slovakia. These changes were made to fuel sources from fossil to biomass or solar energy in 546 buildings in Slovakia, a significant bigger number than the initially planed 300 building. With the new buildings 1 071 new biomass heating installations and 5 475 new solar panels were installed. This helped to reduce the CO2 emissions by 3 984 tonnes.

According to the project coordinators, the results of the final survey confirmed that the success of the project was due to its excellent dissemination and educational campaign. This was due to the outreach of the dissemination campaign, which was much broader and more effective then predicted. The beneficiary applied many innovative approaches and used a wide range of tools to
attract the interest of experts from the field and interest the general public. The Apollo butterfly (Parnassius apollo) was chosen as a symbolic guide for the overall dissemination campaign because it is an indicator of good environmental status.

The focus on raising the awareness from the youngest generation through practical demonstrations of the technologies has proven to be very successful. The key dissemination and educational events were located at Ekopark Drienova, where participants could "see and touch" all the technologies promoted in one place. Animated fairy tales related to environment and climate change were used to approach the younger generations, as well as the teachers and parents. An innovative photo book was also produced documenting all the key project activities, approaches, methods and results. In total 1 397 participants from the general public and 661 experts and professionals participated in the organized events.

Some indicators of the dissemination and awareness raising campaign include:

- 9 160 average number of website visitors per month (the original target was 2 000);
- 6 227 copies of a variety of technical publications (about the Eco-Cluster, on Ekopark Drienova and “How to use renewable energy sources”) were distributed (the original target was 4 500); and
- 8 425 pupils/students from kindergartens, primary and secondary schools and higher education establishments were trained (the original target was 3 090).

School children were introduced to the topic by a series of three different tales that were all published on DVD and distributed to the schools together with an accompanying brochure. Many other events were also organised targeted at children and young adults. In total, 3 070 students participated in project activities; 3 265 children were addressed at kindergartens and primary schools, 4 800 students at secondary schools, and 360 university students, according to the project website.

During the project 18 different events were organised and attended by almost 600 participants. The great interest in the professional manual "Energy from Biomass and the Sun" was demonstrated by the fact that the manual had to be reprinted.
The Eco-cluster created during the project is an association of 18 organisations working in the area of renewable energy sources (RES), such as manufacturers of equipment; biomass producers; organisations promoting the use of biomass, solar energy and other RES; environmental educational organisations; non-profit organisations etc. It is part of a cooperation with the Austrian Oekoenergie Cluster and is their “regional office West”. A number of excursions were organised for members to other Eco-Clusters in Austria, the Czech Republic and Norway. Additional networking activities, as well as four training events for members, were also carried out and an Eco-Cluster e-bulletin was published regularly.

5.4. Environmental education

In the Slovak Republic via international and national projects, we have organised numerous environmental trainings. Environmental education is the core of solving the problem with unawareness of the topic. By participating in this type of education participants gain awareness and knowledge of environmental challenges, their attitudes are influenced, and they gain motivation to improve or maintain environmental quality as well as skills to identify and resolve the environmental challenges (US EPA. 2018). These kinds of educations can be implemented into the scholar system; however, in the Slovak Republic, the non-formal training usually gets a higher success rate. It is not meaningful to teach environmental education at schools since this subject should not be taught by memorisations and that is how our school system mostly works. In Slovakia, environmental education is mandatory sub-subject at the schools and is financially supported by the state. (Sazp.sk. 2018) Furthermore, multiple competitions, presentations, workshops, conferences, programmes, publications, methodics are available for children, pupils, students, teachers, public and easily accessible. Both students and teachers often search for courses and materials.

The best programme implemented in the school system is Eco-Schools. Eco-Schools is the most extensive global sustainable schools programme – it starts in the classroom and expands to the community by engaging the next generation in action-based learning. (Eco Schools.2019).
6. Recommendation

In Section 6 we present a list of recommendations for organizing environmental projects with participatory planning, given as a best example practice from this Report.

*Figure 15: 6 steps for organizing project with participatory planning*

- **Selecting the area**
  - Carefully select the affected site - for example, don't choose an area that is often threatened by flooding, or inland water.
  - Contact the owner of the area and the municipality and clarify the possibilities for cooperation, and what the owner is planning to do at the area and/or at its surroundings.

Source: Own source
Make sure that there is going to be no such works nearby that makes it impossible or difficult to approach the area to be developed.

- Survey people who are using the space. Ask them to rate its attractiveness, use, sociability and connections to other areas and their ideas regarding how to make it better.

**Involving the community, cooperating**

- The community is the expert! Identify and convene the stakeholders as well as skills that could be brought to the project. Discuss the broader, long-term goals of each stakeholder and the settlement at large. Contact the institutions, organizations and individuals of the settlement at the very beginning of the program. Present the ideas and be opened to the remarks of the stakeholders.
- Contact the mayor (or the deputy mayor concerned), the council architect, the chief gardener and if the area is owned by the municipality, then the company that cares for it.
- In order to do “small jobs” (e.g. garbage collection), it is worthwhile to look for institutions with “many hands”, e.g. kindergartens, schools, civil society organizations, communities, sports associations.

**Planning**

- Involve the community in the preparations of the planning: observing the place; talking with people who use the place about their ideas; identifying issues; identifying opportunities for changes that could be made in the short term.
- Before starting the work, make precise and realistic plans involving professionals if possible. Get the public utility map, development plan, gardening plan for the selected area and adapt the ideas to these. Examine the soil structure of the selected area. It may happen that the soil quality limits the list of plant species to be planted or requires the usage of machinery.
- Assign several dates to the works because the weather can interfere at any time. Agree on the dates with other active groups in the city in time in order to avoid organizing more than one event at the same weekend.
Communication, media

- Continuous communication is very important to keep the issue always on the agenda - and in the heads. Partial results are also worth reporting.
- If possible, involve someone from the media in the program’s "headquarters", because they will feel the work their own, thus the density and mood of the reports will be different.
- Keep track of the work on our online surfaces, publish all relevant news and photos.

Implementing

- Start with short-term improvements - e.g. flower planting - that can be made and can encourage further works.
- Prepare the soil before planting. Larger excavations (grounding, ditching, digging pits for trees, etc.) must be carried out by professionals. Be careful not to plant trees under electric lines, because in a few years they will grow on the wire.
- If possible plant native trees and shrubs. Be careful to choose plant species that most people do not have allergies to.

Budget, finance

- Consider that there may be changes in the price of certain products during the implementation.
- Involve a professional in the budget planning.
- Do not count on verbal promises for donations, write agreements about them.

Closing the program

- Always list the people, organizations and institutions who helped the program.
- It’s also possible to express gratitude by diplomas or keepsakes.
- Organize an opening ceremony full of heart if possible link it to a local community celebration, event (city day, village day etc.) or public holiday.
Conclusion

According to the UN Report HABITAT, in 2008 for the first time in history over half of the population lived in cities, and in the European Union already 75% of population lives in cities. The progressing urbanization is creating new challenges in the quality of life in cities and ecological health and safety of residents. The productivity of traditional systems is also being questioned, under these new circumstances. In this context is necessary to apply innovative solutions in water and environment management in cities, with the support of integrating the engineering knowledge with biological and hydrological processes. This multidisciplinary approach is the only way to tackle the complex problems regarding sustainability.

Due to the urbanization progressing in the world and emerging crises in many areas of the life, we are witnessing another return towards sustainable city development. Reactivation of this development concept results from the accumulation of many challenges and, particularly visible problems on urbanised areas. In practice municipal actions directed at green development with the use of the most modern technologies are being taken, in the direction of creating smart cities. Planning sustainable city development requires accurate acquaintance of individual system components of the city and relations between them. It is also necessary to create solutions customized to each city individually, because copying the best solutions taken from other geographical, natural, political, social-economic etc. reality isn't possible. In spite of this, it is possible to use theoretical achievements and practical experiences of individual countries or cities, in order to use their best practice examples to improve the life quality of the residents and improve the management.

Organisations from North Macedonia can learn from the good practices presented in this Report and use the experience from the V4 countries on the road to achieve the sustainable development goals. The provided know-who knowledge in this report can be used to initiate new ideas and projects in North Macedonia and solve the existing problems regarding environmental protection and sustainability.
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