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## The Museum Impact on the Sustainability of the City Development

### Introduction

Modern societies develop in a continuous and multidimensional fashion. Smooth growth of various fields fuels social changes. It allows individuals to progress and, at the same time, it enables changes which influence the way a knowledge-based society operates. The idea of sustainable development relates to many aspects of life – the economy, culture and social growth. It also affects the changes occurring in nature and shapes local communities.

The idea is being realized in three dimensions – economic, social and ecological. The search for harmony, balance and ensuring longevity of development occurs through dedicated care for natural environment and the potential of social growth. This means that we have to care for the natural environment and its resources in such a way that would allow future generations to see and use them intact. Moreover, a balanced growth means care for education of the society in these aspects. The better informed we are about how great a treasure our natural environment is, the bigger the chance that we will not let it go to waste. The portrayal of secure and effective means of using the natural resources are the foundation of respect for nature. This notion also includes care for education, safety and appropriate living conditions for people, with understanding that we cannot destroy the potential for growth of future generations. This way we can guarantee safety of rare goods and resources, as well as continuity of development.

Environmental education in a knowledge-based society is thought to be one of the most essential means of implementing strategies of balanced growth in said society (Krzemiński 1997).

The increased importance of environmental protection and environment itself stems from the issue becoming one of the human rights – i.e. the right to a healthy environment (S. Giorgetta 2002). The notion of sustainable development can be found in The Constitution of the Republic of Poland (art. 5), which indicates that it is rooted in social awareness and cultural law, which the legislator took much from.

The term “sustainable development” was used for the first time during the UN Conference on the Human Environment in Stockholm, however it was not directly

legislated in the Stockholm Declaration. The Declaration focuses on the right to the environment, protection of natural resources, inter-generational justice, resource management and rational planning.

The idea of sustainable development was presented in the 3<sup>rd</sup> UNEP session in 1975, when it was established that a society which implements a balanced development is “a society recognizing the superiority of ecological requirements, which cannot be disturbed by the growth of civilization, culture and economy; able to maintain its development in order to sustain symbiosis with nature, respecting economic production and recycling; caring for future consequences of their actions, as well as the needs and health of future generations.” The notion of sustainable development can be found in many documents produced by the UN, such as the World Conservation Strategy (1980) and the World Charter for Nature (1982). We need to remember that this notion is inseparable from the changes occurring in the environment, as well as global processes occurring in a balanced biosphere. Biological diversity is the variety of life forms, together with the genetic and ecosystem diversity in Earth scale, as well as other biological units (Potyrała 2009).

An example of a great promotion of the idea of sustainable development and raising awareness of how essential biodiversity can be is the Jardin Des Science Museum in Dijon, France. This museum is perfectly aligned with the sustainable development ideology thanks to both the contents of their expositions and the way they operate in the local community. Quoting the words of Daniel Raichwarg: “Following the idea of Biology-and-society natives, we can propose an idea of communicating biological knowledge, or rather, communicating Biology-and-society knowledge – which does not make things easier,” let us consider the functions of the Museum.

## Results of research

The analysis of the Jardin Museum was done using the ethnographic method. Through the review of documentation regarding the museum and the changes it underwent throughout its recent history, some observations were made and several interviews with the staff were conducted. The museum is an interesting example of “a garden of science” which, thanks to a wide and attractive offer, allows for integration of local communities with the notions connected with biodiversity and sustainable development.

The formula according to which the museum functions has changed over the recent years. The change that the Museum has undergone was not sudden. The whole process was carried out in stages. In its initial stage a project was worked out. It kept developing and evolving until it was approved by the town council of Dijon. All activities that take place at the Museum serve a specific purpose, their sense is fixed beforehand. All of the undertaken activities are a part of a long-term plan of development. The undertaken activities are to serve the local community, they are to integrate the region, to expand the knowledge of people living in Dijon.

For about five years the main subject matter undertaken by Jardin des Science Museum in Dijon has been widely understood biodiversity. The Museum focuses on biodiversity of Dijon and the neighbouring areas, it also deals with showing biodiversity of Burgundy. The current challenge is to talk about biodiversity and the natural environment. The main purpose is to propagate knowledge, encourage people to take care of the natural environment and show how important it is for the whole community to concentrate on this issue because it has by no means trivial influence on the life of the residents. Things that initially have a local nature may develop and, as a consequence, become of global meaning. For several years the museum has been intensively dealing with the subject of biodiversity and this is the main subject we can see at exhibitions at the museum. This subject area is very important for the local community. It is very important because of the cultural context – attachment to culture and the inhabited area. Employees of the museum also noticed the great importance of the question of biodiversity for better integration and the development of the local society. Informing the public about the most recent achievements of science in this context is considered to be a duty. Biodiversity is perceived as the heritage of the community, the awareness of its endurance and the necessity of maintaining it is of great importance. Asked about changing the subject matter all people agreed that at this moment biodiversity is the only subject that remains within the scope of interests of the museum.

The Museum is a venue of mediating knowledge, conveying it as effectively as possible. Because the museum is not a typically scientific place, “it is not only for scientists”. Issues that are taken up at exhibitions as well as their form are adjusted to various groups of visitors. The way of presenting the collection is divided into levels in such a way that various target groups visiting the museum could “find something for themselves.” The museum is the centre assembling the local community. It is not a place where you can only gain new information. You can also spend your free time there. There is a beautiful garden there, open and available to all willing visitors free of charge. Also scientific work is carried out in the museum. Co-operation with the University results in classes and common projects carried out at the Museum. The Museum also co-operates with local institutions and enterprises, tries to integrate as many groups occurring in the local community as possible.

Mediation of knowledge is an important challenge which has to be undertaken everyday at a museum. At present the main challenge for the museum is working on communicating with the public. Various kinds of activities are carried out. For example, it is connected with a wide range of types of visitors who come to the museum. Mediation of knowledge is visible in participation of various groups of the public. Visitors have an opportunity to undertake their own activity, for example through a conversation with other visitors. They have an opportunity to share their observations, ask questions, exchange views or establish new contacts. The museum is a place where they discover biodiversity. Mediators and animators try to show in what way this issue is vital for the local community and how it influences the whole

matter on a global scale. "The museum is not a university" nor it is only a scientific place. Various visitors come to the museum and so the level of the message has to be adjusted to various groups of them. The museum encourages the public to take up activities on a wide scale and in various forms. For example, it encourages visitors to take photos of insects in the field. Authors of the pictures note down where a given picture was taken, then the pictures are published on the museum's website – this is how the museum helps to see the evolution of biodiversity which occurs in the town etc. A lot of research carried out at the museum is based on material and finds delivered to the Museum by visitors themselves. Then these collections expand the country's databases. Classes for children and youth that take place at the museum are really popular. Animators present issues which are among issues discussed at school in a very interesting way – they constitute their expansion, complement them and are at the same time connected with biodiversity.

This raises the notion of yet another important aspect – the qualified staff. The traditional role of museum's staff undergoes changes. They are being replaced by people specializing in animation and mediation of knowledge. In order to assemble the most qualified staff, we need to consider some specific criteria.

One very important criterion is education: the museum favours employees who completed biological studies and studies connected with animation. A lot depends on soft competencies. A person who wants to deal with animation and mediation at the museum has to be open-minded, imaginative and know animating and mediating techniques, but first of all "he or she must enjoy sharing their knowledge with others" and "enjoy speaking". First, all employees undergo training, they learn from more experienced employees. Also, meetings are held, during which employees discuss important issues and share their thoughts. Every second week assessment meetings are held to discuss currently implemented solutions and their effectiveness, to consider implementing new and modernizing the existing ways of mediation and animation. One of the main goals of mediators is to motivate the public. To motivate them to think and to act. They try to arouse an interest in the subject, to encourage a visitor to broaden their knowledge after they have left the gates of the museum behind. The job of the museum's staff is undergoing changes all the time. It is evolving towards a widely understood mediation. More and more often mediators are not people who "know and because of that discuss various issues." The change is a two-way process. Various workshops are designed on the basis of their experience and the experience of visitors, doubts which often arise and are closely connected with the discussed issues, and the results of research etc. Employees of the Museum design, create and test new ways and models of mediation all the time. At the moment a great debate is being held on what a modern employee of the Museum should be like. Various parties are taking part in the debate: scientists, the ministry, local authorities, employees representing different positions in the museum's hierarchy. The Jardin des Sciences Museum in Dijon definitely needs natural science experts because the museum is connected with the subject of nature, with widely

understood and popularized biodiversity. The museum needs open-minded and creative people who have a wide perspective of social changes and the will to follow these changes or even to be ahead of them. An important element is the training which combines learning with improving the ways of conveying the knowledge. At the moment the museum employs about 50 people. They can be divided into 5 main departments according to their responsibilities:

- scientists – who deal with collections and exhibitions,
- mediators – who conduct trainings, animations on the premises of the Museum, work at the planetarium as well as those working at the reception – employees who are the first to contact the public,
- administration – people responsible for all administrative and office tasks,
- communication – employees responsible for contacts with the press, compiling texts to be published on the Internet, dealing with documents, leaflets etc.,
- technical staff – employees taking care of the garden, responsible for solving technical problems, who ensure the best possible functioning of electronics as well as the personnel responsible for cleanness in the buildings etc.

The choice of staff is essential as they establish contact with visitors, and their knowledge and skills decide about “the success” - meaning the integration of local communities and raising awareness of how important it is to protect biodiversity and, in consequence, sustainable development.

The Museum is an institution with a clear aim. It has a very clearly defined direction of its activities – it is a widely understood biodiversity. The subject matter includes many threads and has an ability to assemble various social groups. In its projects and at exhibitions, the Museum tries to show biodiversity from many angles and in various contexts. The exhibition “*L’amour c’est pas si bête*” presented the question of love, also from the perspective of biodiversity. An interesting and important perspective of the subject is the result of the concept work of the museum’s employees. Preparation for each exhibition begins with a concept and with deciding what kind of information is to be mediated. Next, appropriate means, exhibits etc. are chosen in order to best present and illustrate the information. The next stage is to make and to present the ready exhibition. The museum focuses on active forms of mediation and animation of knowledge. The museum organizes events which assemble the local community. During such undertakings the visitors have an opportunity to see the Planetarium, the Museum – where they can see exhibits representing animals, the garden, but they also can learn about activities of local associations, for example of bee-keepers who happen to participate in such events. The permanent exhibition housed by the renovated building of the museum presents the history of life on the Earth and biodiversity connected with it. The main goal of the authors was to educate people by making them aware of the fact that biodiversity is a very important element in maintaining a balanced development. Also a very important thing for the museum is conversation. Visitors are encouraged by animators to ask questions.

Mediation of knowledge is based, among others, on a two-way process of conveying information: from the mediator to a visitor but also from a visitor to the mediator. The Museum creates an opportunity to talk, share experiences and thoughts with other visitors. It often happens that there are people among visitors who have already visited the Museum before. Each visit of this kind results in new thoughts and observations. Museologists strive for mediation of natural science to be recognized as a legal discipline – as an occupation. At present talks at the national level are being held. It is a very important issue for the employees of museums.

The museum is a part of the culture of Dijon, it is an important element connecting various groups, associations, institutions, schools etc. The first relation that is created at the museum is based on looking, the next stage is conversation. It gives an opportunity to spend free time, gain new knowledge, and broaden the knowledge one already possesses. Staying at the museum and participating in activities offered gives an opportunity to interact with people, talk, discuss many issues with others. Each relation that takes place here is a beginning of something new – it may result in new inspirations. Even the lack of new inspirations is in a way a signal that may make a given visitor think about some issue. The museum prepares periodic events which give the local community an opportunity to learn about the issues of biodiversity from different angles. An example of such an event was “A week of biodiversity” which took place in May 2014. A lot of organizations and associations were invited to help organize and participate in it. They co-operate with the Museum. A lot of different groups of visitors took part in this event: farmers, bee-keepers, schools, artists and scientists. Thanks to the presence of mediators, who organised numerous animations and also encouraged to talk, one could learn a lot of interesting and important issues. The offer was very diversified. There were attractions for many different age groups. The event attracted a lot of visitors representing various age groups.

At the Museum you can also see a film – at the planetarium, take part in various conferences or tasting of things. All these events are organized in co-operation with the local community, private businesses and organizations. During the event a great interest of visitors could be seen. They eagerly participated in all activities. They were eager to take part in conversations thanks to efficient encouragement by animators and mediators. The visitors were also willing to ask questions, take up a discussion and listen to the presented content with interest. Apart from typically educational values, the whole event was an opportunity to spend free time in an interesting way. Among the visitors there were many parents with children and a lot of elderly people. Some people who at that time were on the premises of Jardin des Science took advantage of the beauties of the garden, relaxing on the grass or playing cards. A conclusion can be drawn that the whole area of the Museum is perceived by the local community as a very friendly place. One has to remember that in this manifold way the Museum tries to draw attention to ties between people, the nature and the environment. High attendance one could observe also shows good promotion and

propagation of activities taking place at the Museum. Conversations with employees allowed to learn that the museum pays a lot of attention to promotion in the local media – newspapers, leaflets about events distributed to local hotels restaurants etc. They also believe in “an active promotion”, encouraging people to visit the museum through presenting interesting exhibits in such a way so that as many people as possible had a chance to see them, for example by carrying them round the town on open platforms. The Museum’s presence on the Internet is also an important element.

Thanks to its activities, the Museum encourages the visitors to think over some fundamental questions:

- Where does the “biological biodiversity” take place?
- In what way do scientists try to explain the issues of biodiversity?
- No species leads a lonely life – do we have enough knowledge about interdependence between organisms?
- What influence on biodiversity do humans have at present?
- Does mankind make its way towards a biological crisis which may lead to extinction of most species?

The whole “garden of science” is a very exceptional place not only in Dijon, but also in the whole France. It became really popular which is shown by the statistics – it is visited annually by over 100 thousand people. The key to success is certainly the fact that visitors are invited to discover the mystery of life in all its dimensions. Nature is presented here in an unconventional way – differently, closer to people. The whole staff working at the Museum is at the visitors’ disposal, which is why they help visitors learn about biodiversity in the town space in the best way possible. Situating three units in one place – the Museum, the planetarium and the garden, allows for the subject matter to be presented from various perspectives. In the garden visitors can find over 500 species and varieties of plants. You can discover and understand biodiversity of wild cultivation and also the influence exerted on biodiversity by people through their activity, production and consumption. In La Roseraie de l’Arquebuse we can admire almost 230 sub-species of roses – among them the wild species as well. The design of the whole garden follows the design of English gardens, where amidst the winding lanes we can admire statues or a little body of water – a fountain. All this one can enjoy in the shadow of trees from 5 continents. Designers also took into account the needs of the visually impaired people to allow them to learn about the subject of biodiversity. In the garden there are also two conservatoires (the 19th and the 20th century) where temporary exhibitions, debates, conferences or various kinds of events are held all year long. The planetarium creates an unconventional opportunity to understand the origin of the Solar System. Mysteries of the Earth are revealed. Apart from the “cinema auditorium”, where films are shown, a permanent exhibition is available. It illustrates the Solar System. Scientific facts are illustrated in a diverse and colourful



way in the “garden of science,” which allows for discovering the affluence, diversity and fragility of the balance in the natural environment.

## Conclusions

The Museum presents a diversity of natural environments of Burgundy in an interesting way, synthetic but also diverse. A visit there includes a lot of discussions. Mediation of knowledge, communication between visitors and animators as well as among visitors themselves often allows for various, often surprising subjects to be touched. Different points of view are very valuable because they give an opportunity of thoroughly looking at things. They allow for looking at things from an entirely new perspective.

The work done by the Museum influences the city and the local community. The variety of presentation methods of the subject of nature has a distinct effect on how many visitors come to the museum, who all belong to different social groups. Apart from standard exhibitions, the museum offers a chance to learn in different ways as well. Visitors can take part in events, performances, movie screenings or open discussions. Such contact with the local society creates the sense of a functioning community, as the museum becomes a part of the city’s social network. The local population cannot only observe, but also partake in the Museum’s activities. Taking part in said activities, while obtaining useful knowledge and new skills, induces the development of closer connections within the community. The flow of information and the opportunity to put new ideas forward to be seen by the public lead to great possibilities in conducting and engaging in innovative projects. The cooperation of various organizations, institutions of knowledge, government bodies and also private companies results in the creation of a thriving social network – a network of influence and interdependence, but also a source of many great benefits. The Museum’s activities also raise awareness regarding nature and its heritage, thus having an impact on the population’s habits towards the environment. The implementation of such gained knowledge into everyday practice will influence each individual, and in the long run, affect the local environment, as well as urban development.

The Museum is a vital link in a chain of responsibility. Its aim is the balanced growth of cities and local communities in the context of biodiversity. Raising social awareness and promotion of the ideas presented in the Jardin Museum are a good forecast for the future. The notion of sustainable development, realized by the Museum, receives a new image. It allows for the development and new initiatives which can be fulfilled by the Museum, thanks to “the network of dependencies around it.” We can observe a “sustainable city,” caring for biodiversity, that appreciates the role and function of a modern museum – a title which, undoubtedly, the Jardin Des Science Museum deserves.



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## The Museum Impact on the Sustainability of the City Development

### Abstract

Modern knowledge-based society develops in a continuous and multidimensional fashion. Smooth growth of various fields fuels social changes. It allows individuals to progress and, at the same time, it enables changes which influence the way a knowledge-based society operates. A variety of ideas and concepts are intertwined. One of such concepts - the idea of sustainable development - relates to many aspects of life – the economy, culture and social growth. The better informed we are about how great a treasure our natural environment is, the bigger the chance that we will not let it go to waste. The portrayal of secure and effective means of using the natural resources are the foundation of the respect for nature. An example of a great promotion of the idea of sustainable development and raising the awareness of how essential biodiversity can be is the Jardin Des Science Museum in Dijon, France. This museum is perfectly aligned with the sustainable development ideology thanks to both the contents of their expositions and the way they operate in the local community.

The museum is a vital link in a chain of responsibility. The main aim is a balanced growth of cities and local communities in the context of biodiversity. Raising social awareness and promotion of the ideas presented in the Jardin Museum is a good forecast for the future.

**Key words:** museum, sustainable development, biodiversity, local community, science and society, communicating knowledge

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