

## **Sustainable garden is an inspiration for a sustainable city**

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### **Abstract**

This article is devoted to the diversity of cultural activity, education programmes and projects in the Botanic Garden of Tver State University. The Botanic Garden of Tver State University is a famous scientific and educational centre of the Upper Volga Region. In 2000-2010 a number of projects on sustainable development have been fulfilled in the Garden. The outcomes of the projects and new perspectives for collaboration are outlined. New possibilities of interaction for the garden's sake in the form of collaboration with NGO, volunteers, businesses, organizations, and international partners are considered.

### **Keywords**

Biodiversity, Botanic Garden, Cultural activities, Education for Sustainable Development, Environmental Education, Educational programs for visitors.

### **Introduction**

The Botanic Garden of Tver State University was founded in 1879 as a living museum in the open air. The Garden is located in the historical part of the city of Tver and covers a relatively small territory of 2 hectares.

The collections of the Garden consist of 350 species of trees and shrubs, and more than 2,500 herbaceous plant species. There are 19 expositions and 6 conservation collections, for example, a collection of rare and endangered species of plants of the Tver region. Since 2009 the Botanic Garden has been a local scientific and educational centre in the Tver region.

The Mission of the Garden is to open to visitors the diversity of the world of plants in order to contribute to the harmonious and sustainable interaction between people and nature. Environmental education, which is meant to facilitate biodiversity conservation in the region, and public awareness of sustainable development issues, is defined as one of the key functions of the Garden. In 1997 the Botanic Garden of Tver State University became a member of Botanic Gardens Conservation International (BGCI) (Наумцев и др., 2009).

Every season the Garden is visited by more than 15,000 people. The Garden offers a variety of educational activities for its visitors to contribute to spreading the ideas of sustainable development such as guided tours, interactive games and classes, interpretative techniques and cultural activities.

The years 2005-2014 have been declared the UN Decade of Education for Sustainable Development. Education for Sustainable Development provides a perfect platform for working with a range of international collaborations and also provides an opportunity to find the interaction between different groups of people who work with the garden.

We also strive to promote ideas of sustainable development for a wide range of our visitors and to show that anyone can do something to achieve harmony with the environment. The Department of Environmental Education was established in the botanic garden of the Tver State University 5 years ago. Today, we offer educational programmes for visitors of different age categories. We are focusing on outdoor activities. Experiences include a discovery walk, plant and animal observations, sensory exploration of plants, plant works and cultural activity.

We offer visitors traditional gardens educational programmes. Among them Early Childhood Programmes, Secondary School programmes and adult programmes. For adult visitors we are

offering a variety of activities: excursions, lectures, landscape design, sustainable gardening, outdoor landscape, volunteer programmes. For Secondary schools we organize diverse programmes, such as Biodiversity 2010, Sustainable Gardening, Red Data Books & Conservation of Plants, Sustainable Development, Interactive Games, and Plant Works.

The year 2010 has been declared as the International Year of Biodiversity. Traditional knowledge is a key to conserving biodiversity. This year, we conducted an environmental camp, dedicated to biodiversity and its conservation. Each day, students studied the various components of biodiversity in the garden: plants, mosses, fungi and ecological activity (establishing of an ecological path).

The International Agenda for BGCI notes that the Botanical Gardens should demonstrate the practice of sustainable development (Wyse Jackson and Sutherland, 2000). In implementing this idea, our Botanical Garden created interactive exhibitions that demonstrate the principles of sustainable land use. Among them "Compost: Step-by-Step", "Herbs or Wild Kitchen Garden" and "Garden of Native Plants". The exhibitions included a hands-on organic gardening experience where children do the real work in the Kitchen Garden and make connections between plants and food. Experiences include: gardening such as planting, digging, harvesting, and planting a seed to take home. All exhibitions have interpretative tables and posters advising visitors how to make the same sustainable models in their gardens and yards.

Cultural activities in the Garden are very popular among citizens. An open-air workshop "Garden as it is Seen by Artists: Let's Draw Plants Together" has been performed in the Garden. A team of teachers and students from the Art College, gave a master class on botanical art and illustration for garden visitors. Primrose Day was held in April and presented spring plants. A Festival of Tulips traditionally attracts visitors and includes master classes: with the artists, crafts, paper and excursions. A master class on batik was lead by volunteers from an NGO.

Our garden now is the result of cooperation at international, Russian and regional level. Since 2001 we have cooperated with the botanic garden of Moscow State University "Apothecaries' garden". We use different forms of collaboration: joint seminars, workshops, mutual visits to gardens, and staff and student exchanges. Workshops conducted in the Garden of Moscow State University supported by BGCI gave the greatest effect on the promotion of ideas of environmental education.

Over the last 10 years (2000-2010) a number of projects on sustainable development have been fulfilled in the Garden. Among the projects are "Local Agenda 21 for Russia" (Milieukontakt Oost Europa The Neterlands), "Open Your Heart to Nature": Raising Public Awareness of and Support for Biodiversity Conservation in the Region" (BGCI and HSBC), "Back to the Roots: Sustainable Land-Use and Ethnobotanical Traditions" (supported by British Council DEFRA) etc. In 2002-2004 the Garden in collaboration with NGO Tver Ecological Club successfully fulfilled a pilot project "Environmental Education for the Citizens of Tver" in the framework of the joint Dutch-Russian Project "Local Agenda 21 for Russia" funded by Milieukontakt Oost Europa (The Neterlands). The main goal of the project was to improve the quality of the town dwellers lives by the saving and development of the green zones of the city of Tver. In this project the Garden was chosen as a model of sustainable territory in urban surroundings. Great attention was paid to the process of establishing of informational space in the Garden. The Garden took an active part in the publication of the document "Strategy of Preserving and Development of the Green Zones of the city of Tver for improving the quality of town dwellers life". As the result of this project the Garden demonstrated its scientific and social capacities for local authorities and the population of the Tver Region.

For the first time this year we are organizing the Plant Conservation Day. The International Project "Adopt the Tree" started last February in collaboration with Minnesota Landscape

Arboretum. The main goal of the project is to complete an inventory of the trees in the city of Tver and to contribute to cognitive interest for plants among the citizens.

We are looking for new possibilities of interaction for the garden's sake in the form of collaboration with NGO, volunteers, businesses, organizations, and international partners. Every garden has a variety of options for interaction of Plants and People. The effectiveness of that cooperation depends on how open and accessible the knowledge will be that we want to share with our visitors.

Over the past 10 years we developed, together with our garden, the way to sustainable development and this is another successful result of our changes. Every employee of the garden contributes to the construction of a garden friendly for local society, and this allowed us to make the transition to a new level of interaction with visitors to the garden and the local community.

### References

Wyse Jackson, P.S., Sutherland, L.A. (2000). International Agenda for Botanic Gardens in Conservation. Botanic Gardens Conservation International, U.K.

Наумцев Ю.В., Шувалова М.В., Пушай Е.С., 2009. К 130-летию Ботанического сада Тверского государственного университета // *Вестник ТвГУ. Серия Биология и экология*. Вып. 14, 2009. № 18. С. 233 – 245. (see <http://eprints.tversu.ru/767/>)

