

# *Green inspiration from the White Carpathians*

*Hostětín model projects of sustainable development*

**The task of the Centre Veronica Hostětín is to demonstrate by means of practical examples, realized projects and results of their monitoring that the attitude towards nature, local resources and traditions in line with considerate management can economically stabilize the countryside and solve unemployment even in rather remote areas.**

Educational modules of the Centre not only focus on theory but also on the practical transfer of experience. They are based on long-lasting monitoring of the realized projects, taking advantage of cooperation with a range of experts, schools and institutions. Many partner organizations in the White Carpathians complement the offer of environmental projects with other practical examples. The cooperation with promoters of similar projects abroad is equally important, enriching the local experience with international knowledge and latest trends.

## ***The Centre Veronica offers***

- **guided excursions to model environmental projects**
- **expert seminars, conferences and workshops** for representatives of public administration, expert public, NGOs and the private sector
- **educational modules, stays and workshops for all types of schools**
- **lectures and eco-counselling service** for the general public
- **library and study room** with documentation of the projects
- **facilities for other training activities in the beautiful White Carpathians**
  - 50 places for trainings and lectures
  - 100 places for municipal and community meetings
  - workshop and base for practical classes
- **accommodation in the passive house, full board – home cooking**
  - 25 places for accommodation in rooms with 2–4 beds
  - home cooking preferentially using local and organic products (BIO)



## Fruit growing

Hostětín has been one of the centres of the Civic Association *Traditions of the White Carpathians* since 1998. The association has been focussing on the preservation and exploitation of old and regional fruit species and promotion of traditional **fruit growing**. In autumn 1998, an **old wooden fruit drying kiln** was restored in the garden of the farmstead purchased by the *Veronica Foundation* (the last drying kiln that remains of the 10 kilns that once existed in the village). Residents of the village dry about 4.5 tons of fruit in the kiln per season. A **juicing plant producing unfiltered juices** from the regional fruit species has been operating in Hostětín since autumn 2000. It has a production capacity of about 300 tons of apples a year. The investment was made possible thanks to financial and technical support of our Luxembourg partners – *Héllef fir d'Natur* Foundation and the *Luxembourg Ministry of Environment*. The juicing plant is owned by the Veronica Foundation and run by the *Traditions of the White Carpathians, Ltd.* Most of the juice production supplied to shops and supermarkets across the Czech Republic is of organic quality (BIO – product of ecological farming) and the range is enriched with other interesting blends (beetroot, mint, green tea) and syrups (elderberry, mint, cannabis, rooibos). The *Veronica Foundation* enhanced the capacity of the juicing plant by investing into a new pressing plant, juice pasteurization technology and storage in 2007.

## Reed-bed sewage treatment plant

The municipal reed-bed sewage treatment plant (STP) has been operating since July 1996. It was the first STP of this kind in the White Carpathians Protected Landscape Area and in eastern Moravia as well. The construction of this STP permitted the removal of a long-term ban on construction in the village, which is located in the protection zone of the Kolelač water reservoir, and opened new possibilities for local development.

The basis of the reed-bed sewage treatment plant is a **constructed wetland with common wetland plants** (common reed, reed canary grass). Water is treated mainly by **bacteria living on the roots of plants** that decompose the organic pollution. This sewage treatment plant complies with strict requirements regarding waste water treatment and, moreover, requires only simple service and very low running costs. Today, it also serves as an educational biocenter.

## Biomass heating plant

Since 2000 a central municipal heating plant with an output of 732 kW is operating in Hostětín. The boiler burns 500–600 tons per year of wood chips from waste wood from nearby woods and sawmills. More than 80% of homes in Hostětín are connected to the heating plant distribution system. This unique investment was financed by the *State Environmental Fund*, a *Dutch grant* within one of the international mechanisms reducing CO<sub>2</sub> emissions – AIJ, the *Czech Energy Agency*, by the *community budget* as well as by the *beneficiaries themselves*. The *municipality of Hostětín* is the owner and operator of the heating plant. The investment in the heating plant has been complemented by thermal insulation of houses which the residents have been installing gradually at their own expense. The heating plant produces approximately 3,500 GJ of heat per heating season and **saves 1,500 tons of CO<sub>2</sub> emissions per year**. Fuel payments do not leave the regional economy, as they would for coal, gas or electricity, but go to the municipality and local entrepreneurs. An important benefit is clean air, which is much cleaner than in the past.

## Sculptures in the landscape

**15 sculptures** that were created during a Czech-Slovak symposium in 2002 are located on historical, visual or other important sites around Hostětín. Some of the sculptures are accessible by local marked paths.





## Passive house

The educational *Centre Veronica Hostětín* has been in operation since 2007. The building is a **passive house that consumes 7–10 times less energy** for heating than usual buildings. The building has a thick layer of heat insulation without thermal bridges, precise construction, controlled ventilation with heat recuperation and utilization of solar heat thanks to windows with perfect heat and technical parameters. The building incorporates many modern as well as traditional and natural materials and technologies, including e.g. straw insulation, clay plasters, unburnt bricks, rain water, etc. Both the interior equipment and the operation itself, bearing the certificate of **Environmentally friendly service**, are environment friendly. The Centre provides space for environmental education and meetings as well as accommodation.

*The building was made possible thanks to unique cooperation of many partners who participated in preparation, financing and final construction.*

## Solar energy

Water heating in electric boilers has been replaced by solar heating systems in nine Hostětín households. Simple and cost-effective **do-it-yourself solar systems** were erected on forty houses in the region as part of the *Sun for the White Carpathians* programme. The annual savings in energy from fossil resources amounts to approximately 2,000 kWh per device, i.e. more than a quarter of the annual electricity consumption of an average household.

A **large solar collector** on the apple juicing plant of 36 m<sup>2</sup> has an absorber with a selective surface TiNOX. This collector provides hot water for the juicing plant and the seminar centre and can also be used for heating. It was installed in 2001 in cooperation with the Austrian organization *AEE* and Luxembourg organization *EBL*. The collector produces 12–13 thousand kWh per year.

There is a **facade collector** with a selective surface of 22 m<sup>2</sup> on the facade of the Centre Veronica building. It was installed in 2009 thanks to *EU* resources – *Programme of cross-border cooperation Slovak Republic – Czech Republic*. This collector produces 6–7 thousand kWh per year.

Solar energy is also used for electricity production. A **photovoltaic power plant on the juicing plant** is comprised of 40 polycrystalline panels of up to 220 kW in capacity. The total installed capacity is up to 8.8 kW. The panels are inclined at an angle of 45° and are south-east oriented at 36°. Their total area is 64 m<sup>2</sup>. The *Veronica Foundation* is the investor in the power plant, which produces approximately 7,000 kWh per year. A **large-scale photovoltaic power plant** was constructed **above the heating plant** in 2009 with a total installed capacity 51.4 kWh. The power plant comprises 234 panels of up to 220 W in capacity. It is the first Czech example of a joint investment of foundations (*Czech Environmental Partnership Foundation, Veronica Foundation* and the *Czech Architecture Foundation*) and a municipality (*Hostětín*).

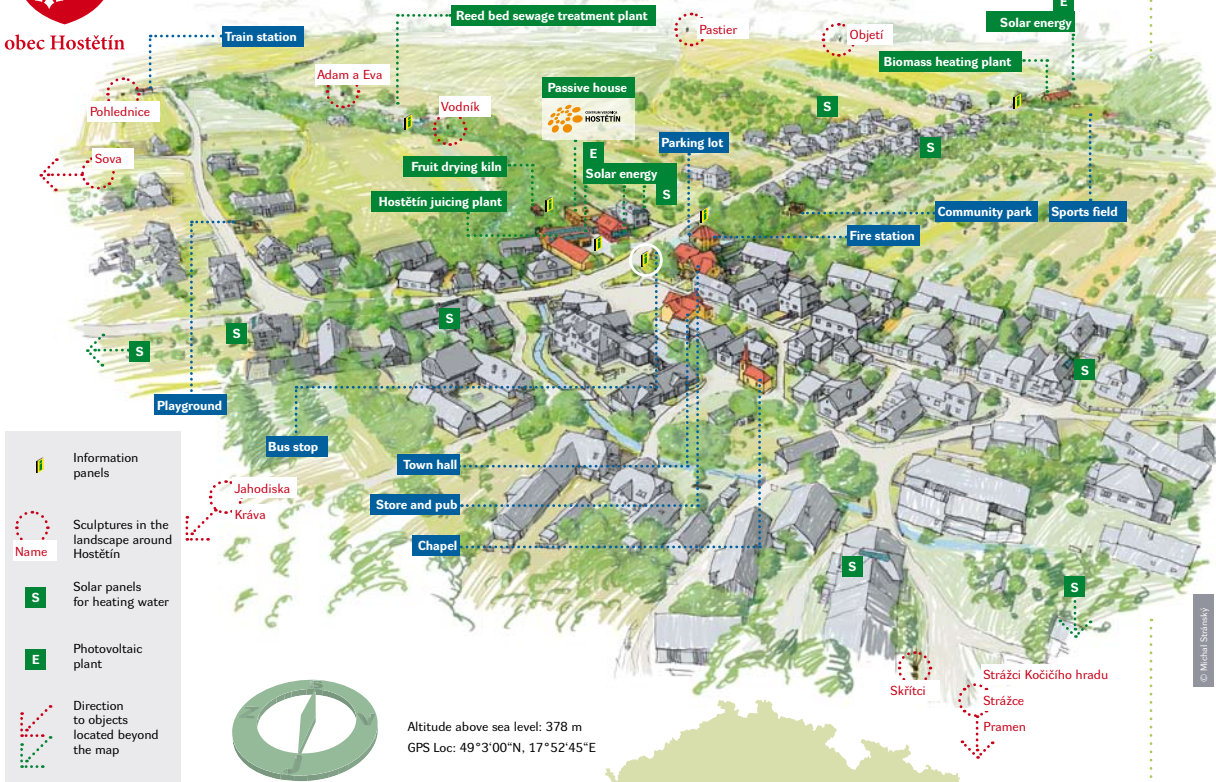
Thanks to solar technologies, **Hostětín will contribute to the reduction of CO<sub>2</sub> emissions by approximately 100 tons per year.**

## Public lighting

The public lighting system was renovated in 2006 by installing **up-to-date light sources which reduce electricity consumption** by at least a quarter and efficiently **eliminate light contamination of the sky**. The lighting units and sources for the street lighting and for the new building of the Centre Veronica Hostětín were donated by the *Philips Lighting* company.



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## Hostětín

The village of Hostětín with 240 inhabitants is located in the northern part of the **White Carpathians Landscape Protected Area** (UNESCO Biosphere Reserve since 1996) in the border area of several outstanding folklore regions, including Slovácko (Moravské Kopenice and Luhačovské Zálesí) and Wallachia.

Since the beginning of the 1990s, many **projects** have been developed in the region involving **the use of local resources, energy conservation, renewable sources of energy** (particularly sun and biomass) as well as environment-friendly technologies.

The Hostětín projects are model ones: they verify environmental technologies in practice and show how they work (see [www.hostetin.veronica.cz/studie](http://www.hostetin.veronica.cz/studie)). Thanks to these projects, every year local residents **save more than 1,600 tons of emissions of carbon dioxide**, i.e. the gas that increases the greenhouse effect and contributes to global climate change.

Hostětín was awarded the **Energy Globe 2007**, the prestigious international award, the **Czech Solar Award 2009** and many other awards for their contribution to environment protection.