



LIVE WATER – FROM BIODIVERSITY TO THE TAP

Layman's report of the project LIFE10 INF/SI/000135



VISUAL IDENTITY OF THE PROJECT

Aquaviva sign is designed a bit differently than usual. It reflects the problem that has evolved throughout human history: the problem of human interference with environment and the situation, to which this interference led. The sign assumes that this situation occurred due to human perception of oneself as a measure of all things, and that we can subordinate environment completely to our desires.

A little known fact is that the so called *Homo mensura* sentence is only a curtailed form of the ancient Greek original sentence, which reads like this: "Man is the measure of all things: of things which are, that they are, and of things which are not, that they are not". Man is thus merely a witness to existence. Through him, creation gets his own consciousness. But consciousness (self-consciousness) requires a responsibility to all beings.

The sign is a call to responsibility toward environment which has its limits and in which all that we witness must co-exist, including man himself.

Zvone Kosovelj, designer

AQUAVIVA

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Ljubljana, 2014

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LIFE10 INF/SI/000135



Let's fill
our glasses
with clear
water!

Water. Creator of life.
Water. Potion of life.
Water. Space for life,
for which we are responsible.

Where *arrowhead* and *mad-dog weed* will flourish,
where *baskettail* and *goldenring* will fly?

Where noble *crayfish* will find its home, where *kingfisher* will hunt?

Where *moor*, where *agile frogs* will dance their wedding dance?

Where *otter* will fish and play?

What the Water Sprite will do without his realm?

And what we will do without Water Sprite?



Water is life.

Let us save the life in waters —
the Water Sprite's realm.

Let's drain the glass.

www.aquaviva.si

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SECOND LIFE PROJECT EMERGING FROM THE FIRST ...

With the solemn opening of the "Otter's Nature Conservation Centre AQUALUTRA" in Križevci on Goričko in the end of the summer 2009 has also ended the LIFE story about otters; about researching their life, tracking their secret paths, about improvements of their habitat and freshwater environment in general, above all about interweaving their paths with ours. In public, Goričko became an "otter's land" bringing new development opportunities to the local people and communities as well as to Landscape Park Goričko. At the same time it is enriching the tourist offer of this remote Slovenian region.

Institute LUTRA with its branch office *LUTRA PANNONICA* maintains educational, awareness raising and nature conservation activities of the centre AQUALUTRA. In the period »Life after LIFE« it has upgraded the content as well as equipment of the centre through the nature conservation projects such as Norwegian and Swiss financial mechanism. Institute's employees spend a lot of free days voluntarily in the centre receiving, informing, and educating visitors by guiding them through the exhibition, along the educational path through the forest and along the brook. Also, we take care of the house and its surroundings. However, this is not enough. A lot of understanding and cooperation of the ministries, state organs, public institutions and local communities will be required for centre to be fully operational and to fill up the market niche in the field of education, awareness raising and development of sustainable tourism in the local environment and broader. Life after the LIFE project is by no means easy.

The project LIFE AQUALUTRA was geographically limited to Goričko, the area of the present Landscape Park Goričko. However,

the problematic of traditionally bad water treatment, which is the consequence of not understanding the interdependence between tap water supply and conservation of water ecosystems, is much more comprehensive. Because every well-executed project brings more new challenges than solutions, we capitalized on our experiences and accepted the challenge for a new LIFE project, this time of informative-communication type. With the project we have addressed the broader public in the whole country. In the summer 2011, European Commission has confirmed the selection of LIFE projects from the year 2010. From 748 applications, 183 were selected for funding; out of these, 15 (from 8 countries) were of Information and Communication type, only 7 of these targeting to public awareness in the field of nature conservation and biodiversity. The project entitled *LIVE WATER – from Biodiversity to the Tap (AQUAVIVA)*, applied by Institute LUTRA from Slovenia, was one of these seven. Although the total project budget was almost half of the first LIFE project, the confirmation brought to coordinating beneficiary the assurance of surviving next three years. However, above all this was "our" project. There were enough reasons for a joy and the signing of a grant agreement was the most solemn event of the year. It could only be compared with the 1st of September, the "official" start of the project, which I awaited with my colleague Tatjana (well-deserved for the financial part of the project) at the XI. World Colloquium of IUCN/SSG/OSG (Otter Survival Group) in Pavia, Italy. It's not happening very often that someone among "otter-people" gets the LIFE project, which means also more research and promotion of this endangered species, so the whole university hall has applauded to our project start. ■



☉ Aqualutra Centre in Goričko



☺ Director of Institute LUTRA signing the LIFE grant agreement

☺ Introduction meeting of members of the steering committee of the project LIFE AQUAVIVA in Goričko



WHAT IS BIODIVERSITY AND HOW PEOPLE ARE CONNECTED WITH IT

Common toad



A mayfly
Newly discovered species of cave amphipod (genus *Niphargus*) in subterranean waters of the River Reka catchment was not named yet.



European beaver



White-throated dipper



Max, a wels catfish has lost its life while its photo was admired by visitors of the biodiversity exhibition in Tivoli Park, Ljubljana. Austrian angler paid 25 € for catching it.

BIODIVERSITY: WE ARE ALL IN THIS TOGETHER.

Have you ever watched to wildgreen treetops, when the diversity of bird songs had awakened you in the spring morning? Have you ever listened to the colourful summer meadow in the sunny day when bees, bumble-bees, butterflies and other insects are hurrying from one flower to the other? Have you ever waded to the blueness of the brook and felt a crayfish under the embankment or saw a frightened bullhead fleeing from under the pebble you raised? If you have experienced something like this, then you know what biodiversity is. European Commission in its campaign for conservation of biodiversity in the year 2010 explained the term biodiversity: "Biodiversity is nature in all its forms and encompassing all living organisms. This is all ecosystems with all plants, animals and microorganisms living in them including genes of these species and connections between them. This is the basis of life. Bees, dancing around a flower. Frogs, jumping into the water. Worms, twisting in the soil. And you, observing all this when walking in the meadow."

Biodiversity has uncontested value for existence of life on the Earth, thus also for people. However, in our materialistically oriented world it is often very difficult to assess a value based on admiring the splendour of nature, even more difficult to compete with tendencies of capital which is destroying natural sources wantonly not bearing in mind where we will live in fifty or more years. Therefore we must ask: Does biodiversity have an economic value? It is not easy to calculate it, while in nature often one plus one does not make two; people mostly realize the meaning of values after these are gone... Some people think that care for nature is luxury we cannot afford. Conservation of species is desired and their disappearance sad, but it is worth if it maintains jobs, increases our incomings and improves living standard. However, the truth is entirely different. Biodiversity loss doesn't improve economic development, rather it weakens it. According to some estimation the economic value of biosphere should be twice of the world's annual gross domestic product. ■

ABOUT THE FLOODS AND INTEGRATING WATER RESOURCES MANAGEMENT

Biodiversity holds the frames of life on our Planet expressing in all diverse forms; because of biodiversity the life is like it is. Not only is it pleasing to our eyes, we also have lots of benefits from biodiversity alias biological diversity. Also for benefits we invented more modern term suitable for our anthropocentrism: *ecosystem services*. Freshwater ecosystems, for instance, retain water in the space and soak floodplains what we don't always appreciate. If there is a great amount of spilled water we call it *flood*. This is entirely natural phenomenon which we often don't take into consideration in spatial planning procedures. That way, great damage is caused not only to people living in floodplains but also to living creatures in the waters.

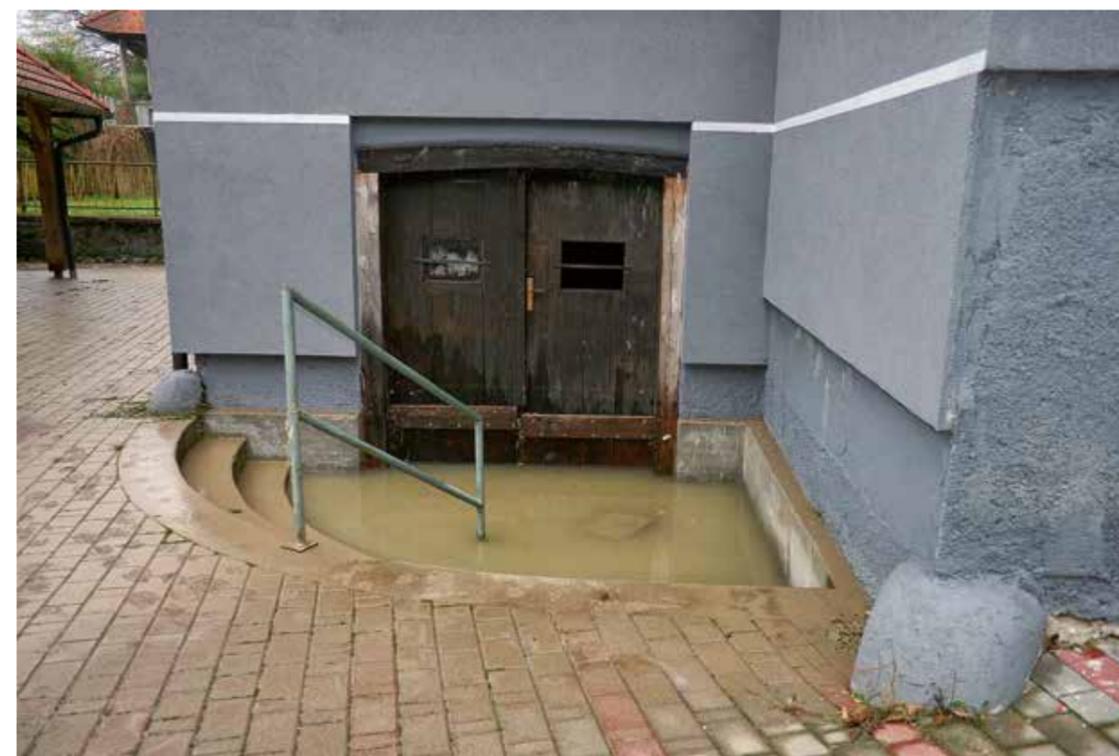
Extremely important role of a huge "sponge" is characteristic for swamps, marshes, bogs and similar wetlands which we are constantly trying to fill up, to drain and eradicate. In our anthropocentric narrow-mindedness we are convinced that we can tame the nature subordinating it to our interests. However, it revenges on us for such behaviour – with severe natural disasters and consequently more expensive measures. And so it goes on towards more and more expensive measures. A river needs space – not only when it suits us and water level is low, mostly space is needed when water level is high. Excess of water, that is unable to spread over floodplain, drains downstream and spills in the lower stream flooding settlements, where it floods even more. If we would try to prevent overflow of water with inappropriate technical flood prevention measures including rigid regulations, removal of riparian

vegetation along water courses etc. we would suffer drought and we would have to irrigate arable land. Also the level of groundwater would decline consequently causing problems in drinking water supply. Drinking water is one of the most important benefits provided by freshwater ecosystems, of course, as long as in good status. We must adapt our way of living to natural conditions and not vice versa. The sooner we will accept this and act appropriately the better and cheaper our cohabitation with water will be.

When we will treat river flooding as a natural process we will understand also the principles of Integrated Water Resource Management implemented by EU-Water Framework Directive. This new approach (albeit not innovative while in USA it was recommended by G.F. White already in the year 1946) to management introduces natural geographical and hydrographical units – river basins – as a basic units of water management. Besides including public participation into the planning and decision-making processes and taking into consideration also other fields of economy the most important guidance of WFD is

“FLOODS ARE AN ACT OF GOD, BUT FLOOD LOSSES ARE LARGELY AN ACT OF MAN”

(G. F. White, “leading environmental geographer of the 20th century”: Human adjustment to floods, Ph. Dissertation, 1945)



📍 Sava River in the middle stream: untameable.
📍 In Litija at high waters – we have to live with it.



determining the frame of natural river basin even beyond state borders. Although rivers are often bordering states they themselves don't know political borders. They are integral natural water space which could be illustrated as a habitat for animal species such as otter or huchen. Only a river, together with its tributaries and other water bodies in the hinterland could assure all the attributes of qualitative habitat which will enable a long-term survival of a population. In a natural river with richly overgrown banks and numerous tributaries otter will find plenty of prey species and enough suitable places to catch prey as well as riparian hiding places to rest and breed offspring. Only a river with no artificial barriers assures huchen a connectivity of corridor to reach the traditional spawning ground every year, where fish will spawn and raise its offspring.

Water directive is aiming to mitigate the negative human impact on waters taking into account also interests of other (human) users of water space. However, it regulates the water management in integrating and sustainable way aiming at assuring a long-term supply of quality water for all users. Only healthy natural water ecosystems can provide us with vitally important ecosystem services. Therefore the directive demands from all EU members to achieve good status of all European waters by 2015, which is almost here. Unfortunately most of member states will not achieve the goal in time. And once again protective goals move to uncertain future ...

Water ecosystems also participate in climate formation and have influence on the local weather – again, as far as they are in good natural state.

Together with its vegetation component, wetlands are huge natural wastewater treatment plants, filtering water and absorbing numerous harmful substances, burdens of human civilization. In photosynthesis plants use carbon dioxide, which makes wetlands a carbon dioxide sink. On the other hand, they release oxygen, used by consumers – animals and humans – for breathing.

So the circle of interdependent life is concluded. Therefore, the conservation of every single species is important, since every species has its ecologic function in the nature, whether we see it or not, whether we are ready to accept this or not. As European Commission emphasizes, **we are all in this together.**

The results of Flash Eurobarometer survey of familiarity with the term biodiversity and knowing its meaning are not encouraging. However, caution is necessary. The Euroba-

rometer survey only included anonymous people with landline phones. What if the word biodiversity is only strange to slightly older generations not knowing where to place it in the modern "flood" of foreign words? Maybe they are very much familiar with simple terms like *natural beauties*, *variety* or *diversity of nature* around us? Maybe they know bird songs in the spring morning, bees flying from flower to flower in the blooming meadow or frog croaking in village pond much better than younger generations? Only that nobody has told them that today, the colourful diversity of the living world is called *biodiversity* even if it is not so abundant any more than at the time of our grandparents. To familiarize people with the term *biodiversity* we made a new Slovenian word for it, *RAZNOŽIVOST*, and we hope it will stick around. ■

- ☉ Planina Polje when the karst underground is filled with water.
- ☉ When the riverbed is too narrow the river needs space on floodplain.



WHAT WE WANTED TO CHANGE WITH THE PROJECT

Despite numerous campaigns, recommendations and accepted international obligations biodiversity is still threatened around the world. It is disappearing at a rate that is 100 to 1000 times faster than the natural extinction of species. More than a third of known species are threatened with extinction, and about 60 % of ecosystems around the world were affected or destroyed over the past 50 years.

Since 1992, when the Convention on Biological Diversity was adopted in Rio de Janeiro, the LIFE financial instrument is the most important instrument for the protection of biodiversity in the European Union. Since then, efforts for biodiversity conservation have taken turns at the highest levels, but we noticed that mostly only words and plans remain. When capital, which should make way for nature protection and conservation of natural resources, is on trial all agreements fail. The United Nations declared 2010 to be the International Year of Biodiversity in order to focus public attention on the decline of biodiversity in the world. In June 2011 the European Commission adopted a new strategy for achieving the target set by the Environment Council in March 2010 for namely "halting the loss of biodiversity and degradation of ecosystem services in the EU by 2020 and, restoring as far as feasible, while stepping up EU contribution to averting global biodiversity loss". Also these targets were not achieved. Biodiversity continues to decline. It is supposed to be saved by the decade of biodiversity (from 2010 to 2020); but with a vision for 2050, set out in the new EU strategy for biodiversity, targets are moving away into the uncertain future. There are many reasons for concern.



Eurobarometer survey showed that Europeans despite numerous campaigns still poorly understand threats to aquatic ecosystems and biodiversity loss. Although Slovenia did not do much worse than the European average, Slovenes were for 6 % better informed about the biodiversity loss in 2007 than in 2010, the year of biodiversity. European average differed by only 1 %. In Europe, in 2007 the biodiversity loss was taken 6 % more seriously than three years later. In Slovenia, the difference was 11 %. Although awareness of the Natura 2000 and its importance is rising in Slovenia (we are high above the European average, which is only 8 %), in 2010 only 26 % of the population knew what Natura 2000 is.

Will it take a century of biodiversity in order to slow down the decline due to numerous human impacts? Perhaps even more because hazards causing the biodiversity loss of aquatic ecosystems are still increasing. People contribute more nitrogen to ecosys-



tems than all natural processes combined, the unsustainable exploitation of natural resources is increasing, invasive alien species threaten native, etc. Only 18 % of watercourses in Slovenia are in good eco-morphological condition. The rest are more or less modified, which greatly affects the diversity of life in the aquatic environment, which is even more vulnerable. And in the light of the more and more frequent floods, which accompany more intense weather events in recent years, watercourses are threatened with even worse interventions that will by no means be in favour of the conservation of aquatic organisms.

Information and communication project LIFE AQUAVIVA in comparison with our first project did not anticipate working with excavator, tractor or similar machines neither with shovels and pickaxes. It set itself the ambitious goal to detectably improve Slovenia awareness of the importance of biodiversity of aquatic ecosystems for life on the planet. To achieve this goal a good communication plan, thoughtful public campaigns and innovative approaches are required. In urban areas where space is saturated with numerous adverts on all kinds of media, it is difficult to attract attention to conservation of such an abstract concept such as biodiversity of waters, because water flows from the tap at every corner. We do not think about the connection between the water we drink and the nearby river when we open the tap. In Slovenia there is more than 50 % chance that the water comes from the Sava River or one of its tributaries. ■



WATER IS NOT MERELY A LIQUID — IT IS A HABITAT

Water is not only a liquid, representing the largest part of every living cell and is therefore labelled as the source of life. Not only a drink that quenches thirst, refreshes and washes away the dirt when it flows from the tap for us, spoiled consumers of civilizational goods. And it is not just endless, cheapest and dubiously “green” energy source for turbines supplying our consumer thirst. Even entertainment and water, ice and snow sports are only marginal welfares and pleasures associated with water.

Water is also and above all a habitat and a media that is as self-evident and indispensable to aquatic animals and plants as air is to us. How many times we think of it, when – in the 21st century! – we, in developed countries, wash toilets and even city streets with drinking water?

The price for our comfort and habits is paid by aquatic residents with their health, often even with life, and finally, ourselves. We have only one planet that we share with other living beings, which do not have their own advocates and fatally depend on our attitude toward living world.

Slovenia is among very water-rich European countries. Annually, over Slovenian territory only in rivers and streams runs about 34 billion m³ of water. This means that the total amount of water per capita is almost four times above the European average. Majority of rivers originate in the Alps, so most of drinking water is found in upstream parts of rivers. The water wealth of Slovenia also includes springs, natural and artificial lakes and part of Adriatic Sea.

Statistical data for 2010 shows that 42 m³ of water are consumed per capita per year in Slovenia. But if we take into account the use in economic and non-economic activities,

this figure rises to 57 m³ (approx. 117 litres per capita per day), which is 13 m³ below the European average and is not increasing. We pump 98 % of drinking water for water distribution system from underground sources, mostly in the Danube Basin.

Today the right to drinking water for all people in the world seems self-evident to us. Unfortunately, it is not so. We have to discuss and fight for it even in the developed world. Also in Slovenia, where water resources are not scarce, the care for this right almost got out of hand. In the spring 2014, a proposal was made to amend the Article 70 of the Constitution of the Republic of Slovenia, speaking on public good, natural resources and the right to their exploitation. Citizens are concerned that the capital will take control of important resources, such as drinking water. With the constitution they want to ensure that drinking water will not become a commercial commodity, but will remain a universal right of all residents.

“EVERYONE HAS THE RIGHT TO DRINKING WATER. WATER RESOURCES, WHICH SERVE TO SUPPLY THE POPULATION WITH DRINKING WATER AND WATER FOR HOUSEHOLD, ARE EXPLOITED IN FORM OF NON-PROFIT PUBLIC SERVICE”
(Proposal for completion of Article 70 Constitution of Republic of Slovenia)



☉ Moor frog in blue
☉ Water strider



Only few ask themselves about animal, let alone plant right to clean water. And yet they all depend on water, especially those which use water also as habitat and media. Also other organisms have undisputable right to water, which project LIFE AQUAVIVA tried to present to the public. Without being aware of this it is hard to talk about conservation of water biodiversity. ■



☉ Proteus, dweller of karst underground

WHAT KIND OF WATER ARE WE DRINKING?

The popularity of bottled water in the world is still growing. Mostly it is sold in plastic bottles, which is also a very profitable business. Good feeling of drinking water from plastic fades away when we consider the amount of energy needed for production of packaging (a quarter litre of oil is required for one litre bottle!), storage, refrigeration and transport of bottled water. Do not forget to add stoppers, labels, etc. and delivering water to doorstep. The worst load is plastic, which is not sufficiently collected and processed. Only think of the impending islands of plastic in the middle of the ocean, which scope is measured in surface units such as "country". It is understandable that packaged water is much more expensive than tap water, but it is not understandable that in countries such as Slovenia, where the water springs from every hill, we are willing to pay a thousand times higher price. However, it can be pumped from underground aquifers in the floodplains along the river; and some water bottling plants do just that. Therefore bottled water is not different than drinking tap water. To both, the same rules on drinking water and control apply. Difference is mostly in favour of tap water because it is fresh, tasty, and rich in oxygen. Bottled water on the other hand can be stale and therefore less quality. The inconvenient truth that bottles are a burden for environment (even in the developed world less than a quarter are recycled) is being ignored here. The most serious criticism is the energy consumption in the production of plastic bottles: from a barrel of oil only 1760 one-litre bottles are gained. If every Slovenian would use each day one one-litre bottle of water, 415 000 barrels (66 million litres) of crude oil would be consumed just for the packaging of this

amount of water ... Additional energy is needed to bring the water to the final consumer and yet additional for possible recycling of plastics. In addition to fossil fuels, the process of making bottles and filling also requires water that ends up as waste water. It takes 3 litres for a litre of bottled water! In Slovenia, a country richly endowed with water resources, this "luxury" is really not necessary. So let's pour ourselves a glass of clean tap water and preserve our natural water in good condition! ■



📍 Spring named *Pod stenami* in autumn
🍷 Glass bottle AQUAVIVA encouraging preserving and drinking clean tap water

EDUCATION FOR ALL GENERATIONS

The world depends on young people! Education is the most important tool to raise awareness on the importance of freshwater biodiversity, since biodiversity conservation begins with us. And the more we know about it, the more we will realise its importance and understand why we have to preserve it. With this reason we organized a number of workshops and lectures for different age groups during the project. To help people learn about the diversity of life in waters, we prepared several worksheets that can be found on the project website (<http://aquaviva.si/sodeluj/delavnice>).

At workshops and nature education days, we learned about aquatic animals and plants, from otter and beaver to reed and water–plantain, their connectedness and co–dependence. We explained life cycle of amphibians, crustaceans, aquatic insects; learned about matter and water cycles and placed animal species in the food pyramid. By making miniature wetlands from plastic bottles and testing them, we learned how they work. Barefoot we waded into a stream and searched with nets and hands for life in its pools and under embankments. Caught animals were observed in pots with magnifying glass. In the end we returned them unharmed back to the wild, where were caught and learned at the same time how to treat wild living beings.

With the help of computer application, accessible on project websites (<http://aquaviva.si/sodeluj/varcuj-z-vodo> or <http://izobrazevanje.lutra.si/izracunaj-si-porabovode.html>) we calculated water footprint and hatched up tips for economical use of water in bathroom, kitchen, garden and store. Every drop counts! We learned what virtual water

is and explained that it normally presents a major share of our overall water footprint. You know the amount of water needed to produce a pair of jeans? A whole cistern. And to produce a kilogram of corn? No less than 900 litres, but even more for wheat.

All these and much more people had a chance to learn and test at the AQUAVIVA stand at various events such as cleaning actions, environmental days, visits to trade fairs and exhibitions, sporting events, etc.

Instead of the planned 20 we performed as much as 60 nature education days outdoors and in classrooms. We include children from kindergartens and primary schools, sometimes even high school students. In addition, we also prepared 30 workshops and lectures, exhibitions in shopping malls, and participated more than 30 times with a stand at events, organised by sportsmen, environmentalists, divers ... ■



It is always interesting in nature's classroom.



WHAT, IF THE OTTER WILL BE GONE?

Particularly challenging task for project partner, *the Institute for Water of the Republic of Slovenia* was to design and construct water models for interactive demonstration of importance and functions of river ecosystems and life in it. By comparing models of the same imaginary landscape at one with the natural, branched lowland river, and on the other with a regulated, therefore, impoverished river, we learn that natural ecosystems without interference work the best. Model is especially current in recent times, since it clarifies why we cannot tame floods.

The second model represents habitats in a natural river and in a regulated river. The comparison shows that natural river provides much more habitats and offers much greater diversity of the aquatic environment.

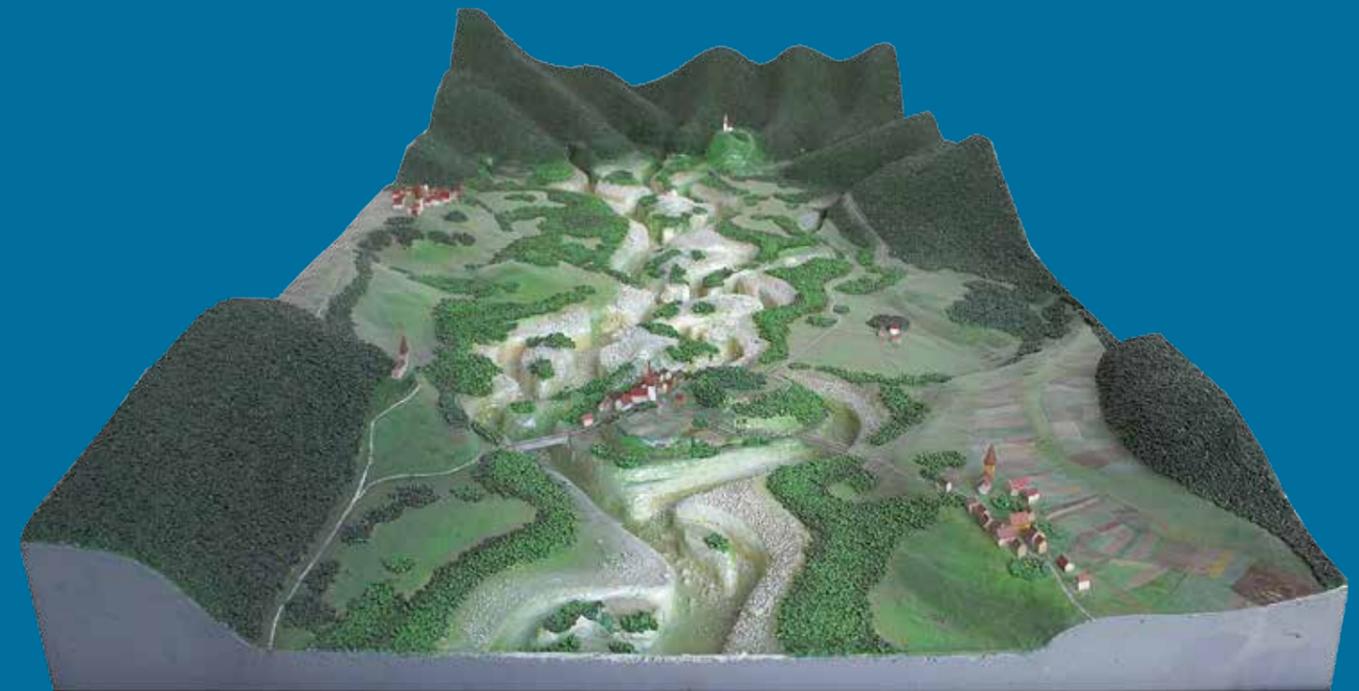
The third model shows the diversity of organisms, the importance of individual species and species diversity for ecosystem functioning. The model shows links between organisms in ecosystem, how to change relationships between them and the functioning of ecosystem, if one species disappears from the system.

Species differ from each other. Some aquatic animals feed on small particles of fallen leaves. Others filter from water even smaller particles, difficult to distinguish with the naked eye, while some graze stones overgrown with algae. Some organisms are attached to stones, others are buried in the sand. The third occasionally come for air to the water surface. Despite the fact that organisms live different ways of life in the ecosystem, they are interconnected into a functional unit.

The models represent a link between the ecosystem diversity in the region surrounding a river, habitat diversity in a river and species diversity in a river. They can be seen and also tested in two Slovenian castles: castle Grad in Goričko, where the seat of the Landscape Park Goričko is, and in castle Bistra near Vrhnika where Technical Museum of Slovenia is. ■

**WHAT ARE THE SOLUTIONS?
THE KEY IS TO UNDERSTAND THAT ALL ORGANISMS OR SPECIES PLAY AN IMPORTANT ROLE IN A RIVER AND THAT NONE IS REDUNDANT. THE DISAPPEARANCE OF SPECIES CAN BE COMPARED WITH REMOVING THE SCREWS FROM A PLANE. WOULD YOU DARE TO FLY THE PLANE WITHOUT SCREWS TIGHTENING WINGS? LET'S LEARN THAT ONLY PRESERVED SPECIES DIVERSITY PROVIDES US WITH SERVICES OFFERED BY RIVER. EVERYONE CAN CONTRIBUTE TO BIODIVERSITY CONSERVATION, YOU TOO. EVERYBODY WILL BE GRATEFUL.**

*dr. Gorazd Urbanič, dr. Maja Pavlin Urbanič, Iztok Kavčič:
from the brochure accompanying
AQUAVIVA water models*



THE STORY OF DIATOMS AND EVERYTHING THEY BECAME

The exhibition **The Revealed River Wonders** – *The biodiversity of diatoms in the Ljubljana river basin* was set by LUTRA Institute on Krakovski Nasip on 8th March 2013. The 22 panels were the only one in 2013, displayed for two months. But it was International year of water cooperation! The exhibition fascinated not only scientists but also citizens, curious tourists as well as random visitors passing by (text was bilingual SLO/ENG), which was shown with a survey. Guided tour of the exhibition was also a part of the World Water Day celebration at Špica on 22nd March. From Krakovski Nasip the exhibition moved to Arboretum Volčji potok, where is still open to visitors. We plan to move the exhibition to other locations in Slovenia and abroad.

Algae. What does this word remind you of? The slimy lining of a river-bed? Is it summer “blossoming” of a lake or sea? Do we think of algae as food or even bio-fuel of the future?

Algae are all this – and much more. Real beauties among them are diatoms. Inorganic cell wall of these tiny unicellular beings is composed of silica (SiO₂). The silica decoration is what we recognize them by. A fragile skeleton is all that remains after their death. But during their life, they produce oxygen, the essential element of life. About 40 % of the earth’s oxygen is produced by diatoms! No living being can be compared with them in this regard.

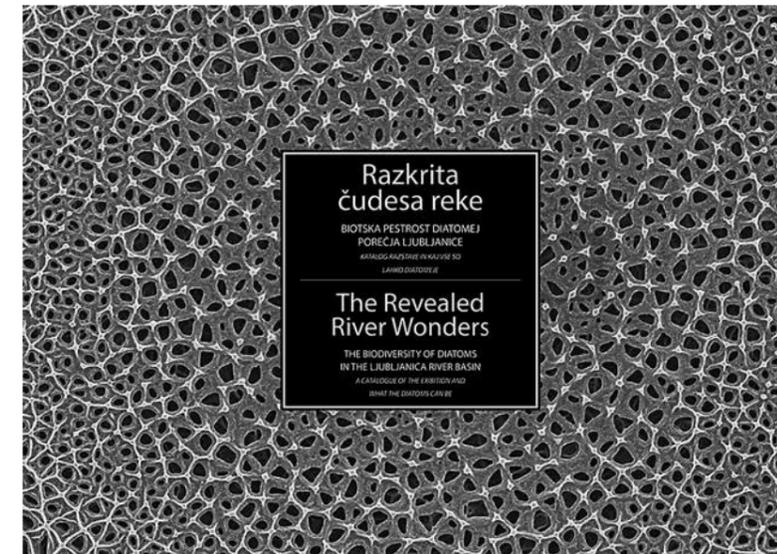
Diatoms contain chlorophyll, which gains energy from the sun and enables production of organic substances – the major food source for aquatic microorganisms and insect larvae. The diatom masses are true “sea meadows” where food chains are starting and upgrading to food webs. It is estimated that a quarter of all global carbon is fixed by diatoms!

As Little Prince knew “what is essential is invisible to the eye”. Such are also microscopically small food producers – indispensable for every aquatic ecosystem, yet invisible to our eyes. Their smallness is compensated with mass and unbelievable species diversity. On one square centimetre of river bed can live more than million diatoms and in Ljubljana River alone hide a few hundred diatom species. That’s why we decided to enlarge more than 50,000 times these tiny marvels of our river with scanning electron microscope in order to demonstrate their priceless importance for aquatic life. Miniature artworks of nature with a variety of ornaments in some species resemble round lace, in other artfully decorated casket – a box with a lid.

Diatoms can be found in very diverse habitats: oceans and seas, rivers and streams, lakes and springs, marshes and moors. Even mosses and tree bark are humid enough for survival of these tiny creatures. More diverse is aquatic environment, more algae species can be found.

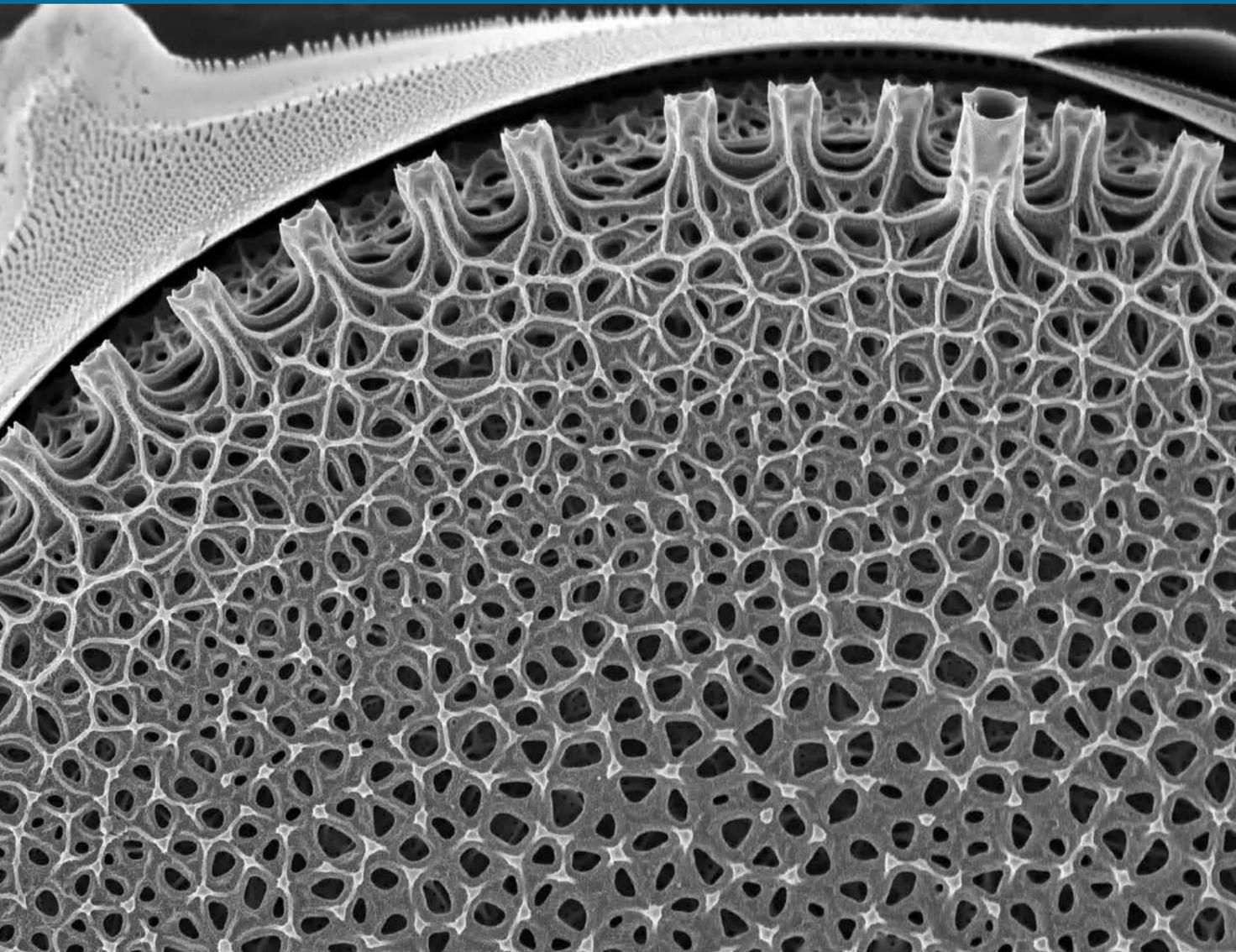
As cosmopolites, most species are found all around the world; therefore it is hard to talk about endangered species or groups. Single species live only in particular aquatic habitats. If affected, polluted or destructed, also the tiny algae, typical for these habitats, will disappear. So the community structure along with frequency of species is an important indicator of quality and health of aquatic environment.

“The River of seven names”, Ljubljana hosts extremely rich biodiversity. And why not! Just think of its river basin! Of tributaries of hinterland of Cerknica and Pivka, of karst underground world with Planina cave and Postojna cave, of numerous springs, sinks and vent-holes. Ljubljana moors is river’s

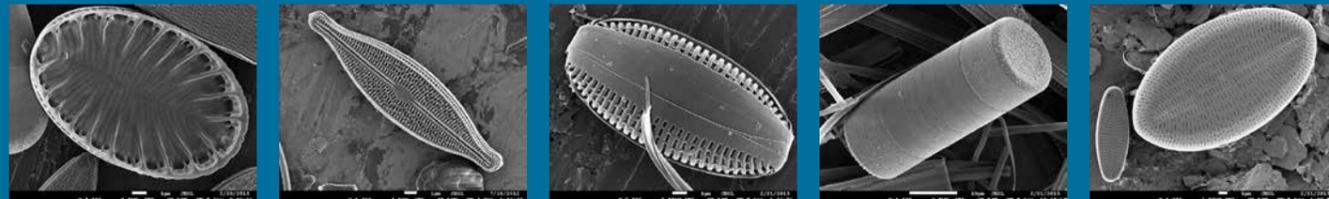


☉ At the lacy “queen of the exhibition of diatoms”
☪ Diatoms visiting Arboretum Volčji potok





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last untamed attempt to overstep its riverbed bounds before calming down, running through the capital and falling soon into River Sava.

A wonderful diversity of the river basin of Ljubljana offers the most various and special habitats to the aquatic, cave and other water-dependant animal and plant species – also to diatoms. At least two thirds of about 500 diatom species from Slovenian list of algae, used for determining water quality, live in the Ljubljana river basin. This huge biodiversity, which only few European rivers are hosting, is a sign of very high quality of water ecosystem of Ljubljana River. Since we can

blame solely man for various pollution and adverse changes in the waters, it is our duty to achieve “good status” of waters, as stated in the objectives of the European Water Framework Directive.

From embankments of Ljubljana, exhibition of diatoms moved to Arboretum Volčji potok. It will move across Slovenia and maybe also abroad. Exhibited siliceous beauties also attracted the attention of passers-by, which have a particularly keen sense of design and aesthetics: architects, industrial designers – and also fashion knitwear designers. Inspiration, interlaced in nature from silica, became a challenge in the world of fashion. Is it possible to transfer these delicate structures to another world, to play with knitwear and softly wrap a human body? It’s not easy, but Tomaž and Urška Draž accepted the challenge and made it possible. Diatoms have come to a whole new life on the catwalk in Kino Šiška. At autumn Fashion Week followers of fashion innovations were amazed by them. Matching sport and leather shoes with diatom patterns were made by Alpina, a Slovenian shoe factory.

Tiny diatoms carried into the world of high fashion the idea of interconnectedness of our lives with water and with nature, and the awareness of the inexorable urge to respect the living creatures, surrounding us and providing us with a better life.

The exhibition was prepared in collaboration with National Institute of Biology and with support from Ljubljana Tourism that provided exhibition space. Since the exhibition was accessible only outdoor on the location itself and for a limited time, we decided to consider numerous suggestions and prepare also a printed version of it (a catalogue), which will be permanently available to everybody. It was published in bilingual edition (Slovenian, English) in circulation of 2000 copies. ■



The queen of the exhibition, *Thalassiosira weissflogii*, caught in meshes of Draž knitwear.

LIVE TREASURES OF OUR WATERS — BIODIVERSITY

Once again we took advantage of the good cooperation with Ljubljana Tourism, this time in the project's final year (2014). The large-scale exhibition of freshwater biodiversity (120 large panels) with Slovenian and English text was prepared on Jakopič Promenade in Tivoli. The exhibition was entitled "Live treasures of our waters. Life is better with them".

The exhibition outdoors in Jakopič Promenade in Tivoli was created as part of the LIFE project **AQUAVIVA: Live water – from biodiversity to the tap (2011–2014)**. The purpose of the project, as well as exhibition, is education, raising awareness and encouraging various target groups to improve their attitude towards water, a more and more important natural resource. Project encourages reflection on the relationship between preserved freshwater biodiversity and water, which flows from the taps in our homes. It represents, popularizes and promotes biodiversity and emphasizes the right to water for all living creatures, not just for humans, focusing on aquatic animals and plants. It promotes sustainable use of natural resources and wise water management.

Exhibition of freshwater biodiversity, representing both, species diversity and ecosystem diversity, was set at one of the most prominent and visited outdoor galleries, in Jakopič Promenade in Tivoli Park in Ljubljana. With it we built up the objectives of the LIFE project. The exhibition was on display to citizens of Ljubljana, preschool children, schoolchildren, students and other target groups of the project. On 120 panels a great diversity of underwater and waterside life of Slovenian rivers and lakes was presented also to occasional visitors of the capital, tourists

from Slovenia and abroad. Information on the diversity of Slovenian waters and their lives was united and offered in one place, contributing to the overall tourist offer of Ljubljana.

Due to chosen theme and the complexity of the format the selection of photographers was limited. For the main guideline we chose aerial photographs of a biologist and aviator Matevž Lenarčič. In an ultra-light aircraft he flew over and photographed most of the Slovenian wetland systems. We have added drawings and photos of famous authors and a selection of award-winning photos of photo contest of LIFE project AQUAVIVA.

Two spring months (May, June) is the time when many schools organize cultural or nature education days, intended to visit cultural events outside the school. In this time, the exhibition became the outdoor classroom, sometimes with the interpretation by teachers and sometimes with professional guidance by biologists working at the LUTRA Institute. We especially celebrated the environmental days: **the biodiversity day** 22nd May (the opening of exhibition with cultural program) and **Sava day** (stand on Saturday and Sunday, 31st May and 1st June).

The exhibition – as whole or in part – is suitable also for placement in other similar environments in Slovenia and abroad, especially outdoors due to the panel size. ■



Biological octet BF sang at the opening ceremony of the exhibition of biodiversity of our waters in Jakopič Promenade in Tivoli Park.

WILL THE FISH “FARONIKA” RETURN?

Y early there are numerous spring cleaning actions of rivers and streams in Slovenia, organized by municipalities, associations, schools and other local organizations. So instead of organizing our own during the project, we joined traditional cleaning actions and added additional value in the form of information stand. On stands could passers-by, participants and observers of the cleaning action learn a lot about life in the river or stream by observing different animals under a magnifying glass, touching otter fur, learning to distinguish between aquatic mammals and getting to know about the threats to freshwater biodiversity.



Interesting metal waste of human civilization, which ended in the waters were collected and transported to the autonomous cultural centre Metelkova in Ljubljana. Artists united in this important centre for alternative culture in Slovenia, have enthusiastically started with designing, welding and screwing, creating three original sculptures of water-related animals: otter, fish and dragonfly. They went towards a new life: otter *Bistra* to Goričko, dragonfly *Kolpski porečnik* to Kolpa, and fish *Soška faronika* to Kobarid, where it

became the centre of attention of the Festival of marble trout 2014. Each was given a plate with a message on the conservation of the aquatic environment and its biodiversity.

Particularly valuable are the species, living in a narrowly defined geographical area – endemics. Such is marble trout, the endemic of Soča river basin. The sculpture, which we named *Soška faronika* is composed of discarded metal objects, pulled from the water by divers. It was created in the Autonomous Cultural Centre Metelkova in Ljubljana, under the hands of the sculptor Rok Mohar. We want it to be a guardian at the Soča River, reminding people to respect the river and spare it with wastes of human civilization. We depend on water a lot more than we realize. Fish faronika is a mythological animal, upholding our planet. Till now, it has survived only in the folk tradition of Primorska region. In the myth, it is threatening: if it waves its tail, the world will be overflowed; if it turns to its back, the world will be damned. These ancient traditions bring a warning: we should respect the waters, protect them and preserve them intact – then the fish faronika will hold its peace and there will be neither earthquakes nor floods. ■



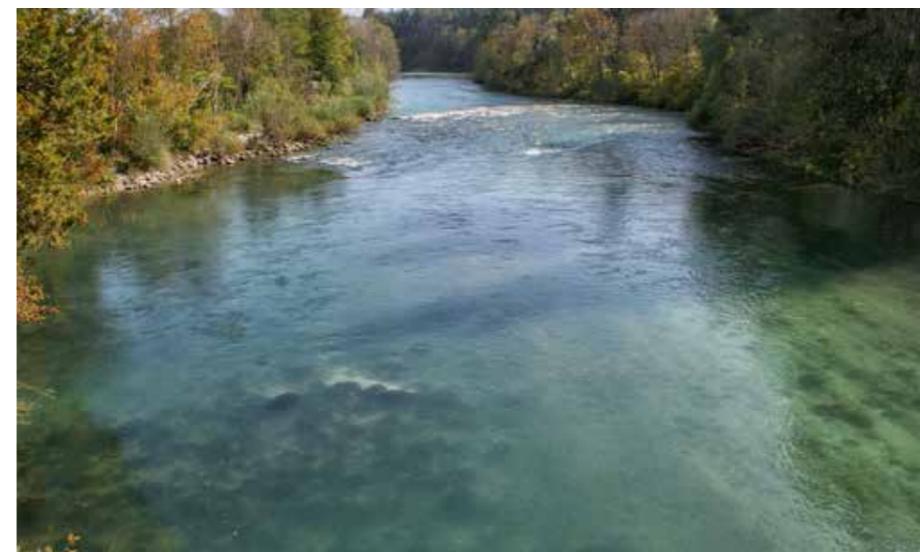
The fish *Soška faronika* was made by Rok Mohar from AKC Metelkova from waste metal material, dumped in rivers. At the opening ceremony of the “Festival of marble trout” in Kobarid local community *Soška faronika* was accepted for their own.



BATTLE OF WORDS FOR THE SAVA RIVER

The Sava River is the longest Slovenian river that only on the territory of Republic of Slovenia runs 220 km. This is only a quarter of the entire route, which starts in Zelenci and in Savica, respectively, and ends in the Danube River. At its 944 km long journey Sava passes four countries (Slovenia, Croatia, Bosnia and Herzegovina, and Serbia) and connects three capitals: Ljubljana (SI), Zagreb (HR) and Belgrade (RS). Even Sarajevo, the capital of Bosnia and Herzegovina, is located in the Sava river basin.

The Framework Agreement on the Sava River Basin, which was adopted in 2004 by the countries along the river, is proclaimed a good practice and a model of cooperation between countries in the Danube region. Article 11 speaks of a common sustainable management of the Sava river basin, firstly mentioning the *“provision for water in sufficient quantities and of adequate quality for the preservation, protection and improvement of aquatic ecosystems, including flora and fauna and ecosystems of natural ponds and wetlands”*. The biodiversity of this basin is not mentioned among the important problems such as organic pollution, hydro-morphological changes, floods and water resources. Therefore, the project LIFE AQUAVIVA set a task to point out a common responsibility for the preservation of freshwater biodiversity of Sava River, from the springs to the confluence into the Danube and thus significantly influence the behaviour of other countries of the Agreement. Our country has a particularly responsible task, because the catchment area of the two springs lies entirely within Slovenian territory. It would be expected that we will be exemplary guardians of Sava River, passing it on to southern neighbours preserved and



📍 Where are you running, Sava?
How many more times you will be crucified?
📍 Sava River at Globoko in Gorenjsko region – still intact



Highschool students from the countries along Sava River and Sava Commission members at 3rd Youth parliament in Ljubljana. The meeting ended merrily with a boat trip on Ljubljanica River.



clean, but it was us who put on all fetters. Considering that from the Slovenian–Croatian border to the mouth of the Danube, Sava River flows freely, without barriers, we must realize that it is chained only in Slovenia.

Since 2007, parties celebrate 1st June as *International Day of Sava River*. Every year on this day across the Sava river basin series of events occur, promoting the river, highlighting its importance, natural values and socio–economic potentials as well as the importance of cross–border cooperation on the use and protection of water of the whole river basin. The Sava Commission has decided to celebrate Sava’s Day with the Youth Parliament, a two–day meeting of selected secondary schools from all four countries along the river. This year, for the first time the meeting was held in Slovenia, in Biotechnical Educational Centre Ljubljana and for the first time it was organized by LUTRA Institute collaborating also with another project that seeks to protect rivers, *Moja reka si*. The criterion for selection was the quality content scheme of the current ecological cartoon based on a model prepared by UNESCO.

The tension before selecting the participating schools in May was increasing. And when it peaked and the best schools (three from Bosnia and Herzegovina, two from Slovenia and Croatia, and one from Belgrade, Serbia) were selected, catastrophic floods in the Balkans had occurred and the meeting was postponed to September. How symbolic! In the rampage of high waters on Sava’s day we could discern a warning ...

Nonetheless we took students from Kranj and secondary school Črnomelj through the exhibition *Live treasures of our waters* in Tivoli. Initially a bit reserved, but later a very lively discussion has revealed that today’s

high school students do care what happens to our rivers and nature in general and are willing to fight for their aims. In the middle of green Tivoli we recorded one of the most moving songs about the river, which drew a lot of admiration in public, and we pondered on the future of young people.

In mid–September, the Youth Parliament did happen and exceeded all expectations. Students enjoyed discovering the old town of Ljubljana, by solving tasks during the orientation hike along the Ljubljanica. The next day, divided into PRO and CON groups students had to defend or refute (in English) the statement “*Sustainable development with the nature protection along the Sava River is also possible with the construction of numerous hydroelectric power plants on the river*”. Students took the debate very seriously, at times even too much, so the moderator had to interrupt several times to calm down the debate. Everybody warmed up, the debaters on stage and the young crowd in the hall. The aim was achieved and the award from LUTRA – a guided boat tour of the city from the frog perspective – was more than deserved.

During the entire event there was also an information stand with the biodiversity of the Sava River Basin, where it was possible to learn about aquatic insects through a magnifying glass. Visitors were able to touch the otter fur, admire by beaver gnawed tree trunk, and try to distinguish native and non–native species of aquatic mammals. A few days later a thank–you note for the best International Day of Sava River ever arrived from the secretary of the Sava Commission. ■

ADVERTISING OURSELVES

In the project's last year (2014) it would be for everyone, who uses public transport at least a bit, hard to overlook painted intercity buses. The bus exterior was covered by different animal and plant species such as beaver, catfish, salmon, gudgeon, crayfish, tree frog, water-lily, pondweed, dragonflies, kingfisher... and otter on the rear end of the bus. Could not miss it, it was a **"freshwater biodiversity"**. Buses drove in four areas of Slovenia, everywhere in the busiest time of the day (bus that drives along Sava River to Litija, was parked at the main bus station in Ljubljana at 3 pm).

The modern city buses are equipped with LCD screens through which we were inviting passengers to the opening of the outdoor exhibition, to the Ljubljanica river bank and in Tivoli, to diverse "water" event on World Water Day at Špica in Ljubljana. And if anyone had missed the post on the bus, it could see it on the screens in shopping malls. Did you know that long moustache helps otter with orientation in muddy water? Among the information with photographs of aquatic organisms also short comics with beaver and otter were played that entertained passers-by.

Sooner or later each of us wanders into a shopping mall, whether you live in the city or in the countryside. Therefore, we surprised visitors with an exhibition in the Qlandia shopping malls. Numerous panels presented the diversity of the living world in our waters and its threats, accompanied with advices how to avoid excessive burden on the envi-

ronment. The task of the exhibition was to awaken consumers with information that otherwise gets lost in the flood of advertising messages and to awaken the sensitivity of consumers for the natural values and its conservation. Due to public interest the exhibition was extended several times, which enabled us to reach more visitors.

Unfortunately we discovered not all shopping malls are equally receptive to advertising socially important awareness-raising topics. Again, we were for information richer. It does not matter the name of the merchant, but people in liable position. ■

Our freshwater biodiversity was brought to life by Jurij Mikuletič. Who would not notice a painted bus?



Animated comics for LCD monitors were made by Finish illustrator Seppo Leinonen.

Nowadays a website is a mirror of the project and of the leading organization. If there is no website, then a project does not exist. With unattractive and irregularly updated website the project or leading organization has very little chance to be noticed. The website **www.aquaviva.si** was especially well visited in the last project year because we immediately reported on each new event. We also tried to popularly present project content, which is not always easy. Most interest for the website was shown by pupils and high school students, as they found a welcome support for teaching contents and extra-curricular activities.

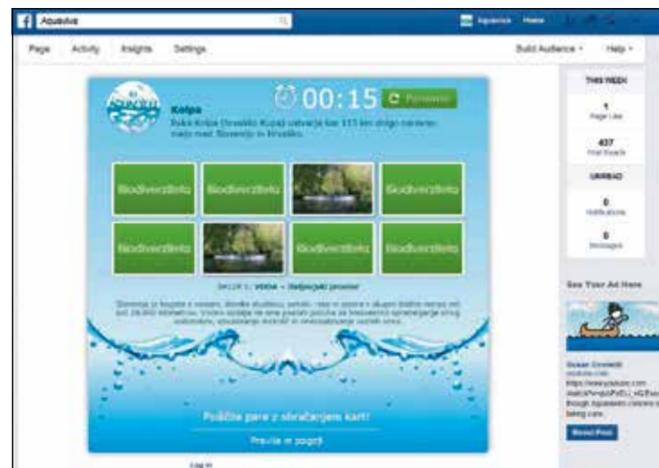
To well-visited websites links to Lutra Institute's homepage and other related pages aided, especially to the **Education Network** (www.izobrazevanje.lutra.si), which aims at non-formal education for children as well as adults. Numerous educational workshops and nature education days in schools, outdoor or in the AQUALUTRA otter centre increased number of schoolchildren visiting the website and vice versa, attractive websites increased the interest in workshops. Also connecting with municipalities, especially with the City of Ljubljana, which organizes and supports small research and educational projects, enables the spread of project activities into new kindergartens, primary schools, associations and informal groups.

The role of online social networks in modern communications is undoubtedly huge and still growing, although the types of networks are changing. In Slovenia, by far dominating is Facebook, followed by Twitter, while others are less prevalent. Also AQUAVIVA project's Facebook page was used for

posting brief reports, news, comments, and events invitations. We regularly posted short comments on Twitter. With the help of both networks as well as private FB profiles we increased visit on the project website. Our plans were seriously worsened by the Electronic Communications Act, which since the mid-June 2013 so strongly protects the privacy of website visitors that data can no longer be collected. According to our experience and previously collected data, we can estimate that the project site is monthly visited by more than 500 visitors.

In collaboration with MTV Slovenia and with the permission from UNESCO we translated and subtitled an educational cartoon about biodiversity. Cartoon was especially noticed by youth, because it was played on MTV three times a day for seven days. Currently it is accessible on the project website.

Our website was constantly active. On the topic of freshwater biodiversity we prepared an online game *memory* that was also advertised in online media. With photo contest we attracted quite a few good Slovenian nature photographers, whose selected photos excellently complemented aerial photos of aviator and biologist Matevž Lenarčič at the exhibition on freshwater biodiversity in 2014 in Tivoli. ■



Project website
"Memory" game on Aquaviva Facebook page

CAUGHT IN THE OTTER NETWORK

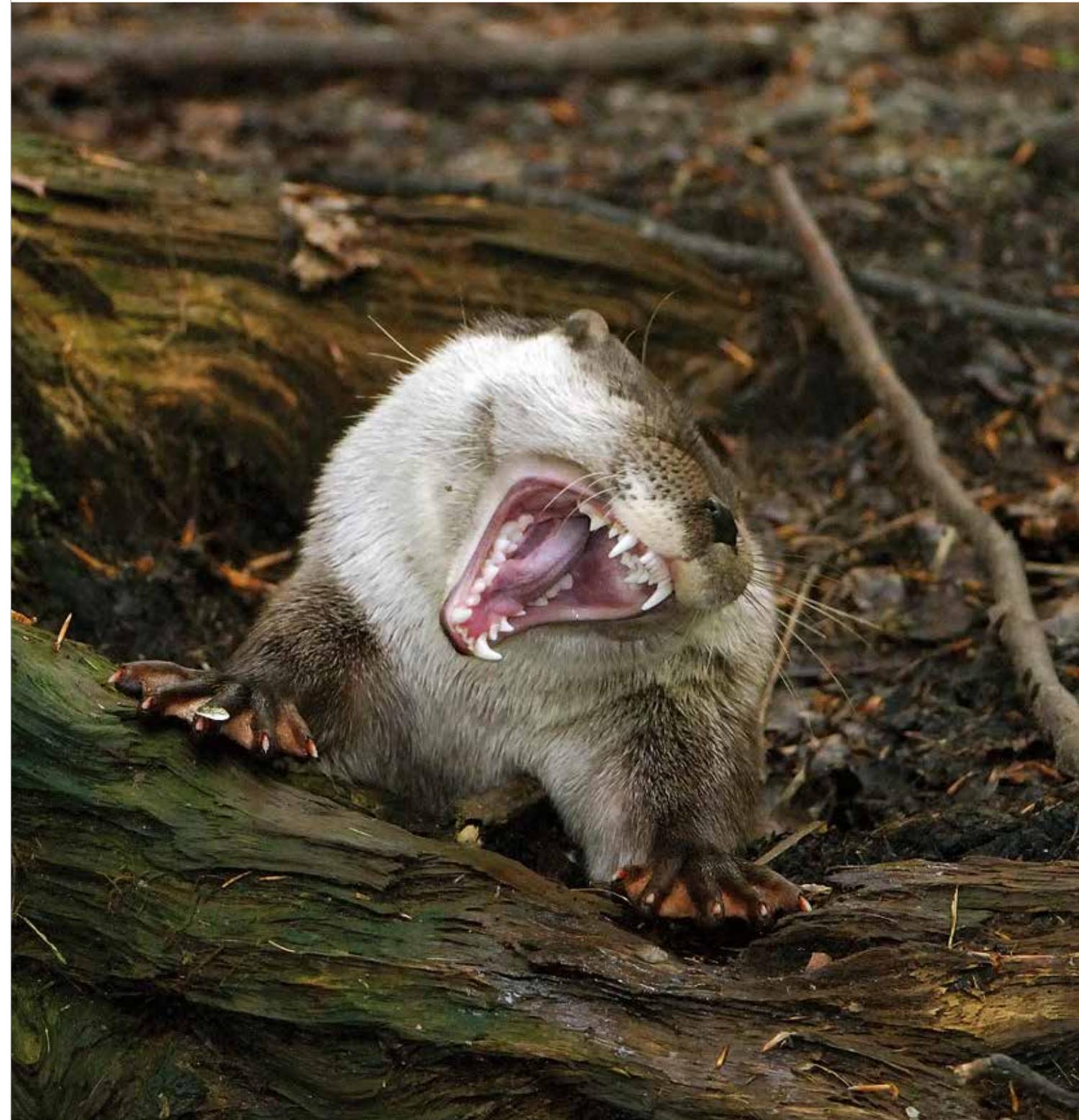
Networking is the key of success. If we are talking about the communication project, this statement must be read frequently. That way, new good ideas are born, new bonds of business and friendship are knitted and last not least, new possibilities for working on projects and surviving turn up. Above all, you never know what you have missed on the lost event! Still, one can always learn something, even from negative experience.

Our networking already began before the format project start, when together with Tatjana we participated on XI. International Colloquium about the otter on University of Pavia (Italy) in the year 2011. These are the most important meetings of otter specialists working in the frame of IUCN, prepared every three or four years, every time in different part of the world. It happens not very often that "otter people" can do something for these endangered animals and their living environment in the frame of a bigger project, as LIFE projects are; therefore, the international group has welcome the beginning of our new project with an applause. At this occasion, a new member from Institute LUTRA, was accepted to the **Otter survival group**. Slovenia now has two representatives in this species survival group.

Very much like the group IUCN/SSC/OSG is legendary tied connected, also some few nature conservationists, being lucky and having knowledge to work on the projects LIFE, are more and more tied to the special "LIFE family". Every year we are more numer-

ous, we help each other more, networking especially tied in cases of NGOs. We never travel to another European country not to check earlier if there might be an interesting LIFE project going on. Networking of this kind, mutual benefit and exchanging of good praxis is supported also by European Commission.

In the autumn 2011 we responded to the invitation of our colleagues, Danish otter specialists, and visited Denmark and very well known Institute NERI, Department of Wildlife Ecology and Biodiversity in Kalø. We have introduced both our LIFE projects: already finished AQUALUTRA and AQUAVIVA which has just started. Colleagues from Institute NERI have listened carefully about our project experiences; although NERI is significantly bigger and also internationally recognized organization, it has turned out that their experiences are similar to ours. On our nature conservation excursion around Denmark we have been acquainted with Danish LIFE project for conservation of dunes and their wildlife (especially waterfowl) in Vest Stadil Fjord which is especially important for conservation of otter population on seashores. With our Danish guides, we visited reserve area for Eurasian beavers, Klosterheden, with all the characteristics of beaver habitat including structures made by beavers (bea-



📍 Photograph of the otter, an ambassador of freshwaters and their biodiversity, awarded in the "Green Week" in Brussels. (Photo by Hrvoje T. Oršanić)
🌿 Seashore of the Irish Sherkin Island is rich with freshwater sources offering the Eurasian otter excellent habitat.



☛ Workshops with schoolchildren in Ireland were pretty much like ours.
 ☛ In the Sherkin Island even the ship is forgotten.



☛ Networking of LIFE projects in Ireland: Tatjana (left), Ruairi and Marjana



ver castles, dams, fallen trees). Beavers were reintroduced to this area and their population has been successfully spreading. We also visited the system of wetlands and lakes in the inland where a healthy and viable population of European otter is thriving. After gently "scratching" big sturgeons on their back in the modern aquarium in Silkeborg and sharing in excellent nature interpretation we concluded our exceptionally instructive visit of Denmark.

Next month we have introduced our project in the meeting of RESTORE LIFE+ projects in Ljubljana. With the central topic of river restoration the projects related to the theme of the project AQUAVIVA. How to return rivers their original form, how to maintain qualitative habitat to animal and plant species living there? Above all, we must enable them uninterrupted communication along the river corridor – their living space.

One of LIFE+ river projects named *Ljubljana connects* led by Faculty for Civil and Geodetic Engineering (University of Ljubljana) is also running in Ljubljana. It aims to improve the ecological function of the highly degraded section of the river Ljubljana from the city to its outflow to Sava River and upstream. With restoring measures on the obstacles in the river, the river corridor will get the primary role of habitat with high biodiversity. That way, the goals are totally in line with the aims of the project LIFE AQUAVIVA as well as with the aims of the smaller project of Institute LUTRA, *With the otter through the capital* supported by Municipality of Ljubljana.

The May 2012 was extraordinary troubled with plenty of events. European LIFE projects celebrated 20th anniversary. The meeting and presentations of all Slovenian LIFE projects first in the Ministry of Environment, then in the final event on the castle Podsreda, Re-

gional Park Kozjansko, also our LIFE project AQUAVIVA has joined. In next days, it has participated in the "green week" in Centre Europa in Ljubljana, next to it, to the invitation of European Commission also in true "Green Week" in Brussels. Institute LUTRA has won the award for the photo of yawning otter (masterly taken by Hrvoje T. Oršanič) in 20th photograph LIFE project contest.

In the end of April 2013, IUCN European Otter Workshop (EOW 2013) was held in Ireland. Also the two members of project team AQUAVIVA participated with the topic of otter conservation; however, we took the opportunity also to present and promote the project AQUAVIVA. The conference took place in small but nice and much known tourist city Kinsale. This workshop discussed the topics related to the study, management and conservation of the European otter (*Lutra lutra*) population as well as overview of the national and European projects devoted to these topics to enhance the networking.

Following the two day workshop in Kinsale, participants had the option of joining a two day field trip to one of Ireland's premier SAC sites at Roaringwater Bay, West Cork with staying on charming Sherkin Island, where the participants of meeting helped the colleagues in surveying of otters and seeking of fresh otter spraints for genetic study. Along the beaches of Sherkin, where wonderful natural environment still occurs it is possible to meet the otters in the daytime while happy eyes may even catch sight of whales and seals! In such an environment new "life"

bonds appeared between participants. The holidays planned for May suddenly turned to a working life. Invited by Irish colleagues, we have visited two LIFE projects which aimed at river biodiversity and also otter conservation: IRD Duhallow Life Project and MulkearlIFE. With our participation, the outdoor workshop for pupils along the river became international – and we all enjoyed it. The lecture for students and common lunch became excessively pleasant conclusion of Ireland. We have promised, we'll see each other again.

And we did see. In Ljubljana, on the final conference of the project TRAP (Territories of Rivers Action Plans, <http://trapproject.eu/>) which our colleagues from Life Duhallow attended as partners. TRAP aims to contribute good practices on integrated river and river territory management, to jointly develop a Regional Attractive Growth Model, and to transfer at least one good practice for each partner. The whole day trip under our guidance along wild Sava Bohinjka River, the visit of Zelenci and well known bee-keeper in Podkoren, the rivulet Belca, Bohinj Lake, upon which a ray of sunshine shone just at the right moment, "kozolci" in Studor village – all these persuaded Irish colleagues used to nasty weather, that Slovenia is a wonderful and immense watery country which is necessary to be visited again. Institute LUTRA was not a partner in this big international project; however, it will be in the next ... The bonds are interweaving further beyond the frames of already concluded project.

It is not possible for some events to be included into the project's frame, since they happen to occur after the end of the project. In Krakow, Poland, an information LIFE project NATURA Mission (LIFE11 INF/pl/000478) is running. In October 2014, it has organized the Natura 2000 Platform Meeting of information LIFE projects addressing challenges of raising public awareness and knowledge of functioning of the Natura 2000 network. The invitation to this meeting came from European Commission and has catapulted our project to Krakow. Again, the bonds have networked between related projects, opinions have collided about methods of communication with publics, examples of good praxis with nature conservation and Natura 2000 campaigns have been exchanged.

The invitation from Italy for networking with related project AQUALIFE (www.aqualifeproject.eu), just started, has already come – the evidence of life going on regardless to the beginnings and endings of LIFE projects. ■



📍 The Irish visit to Slovenia: nasty weather was not bothering our visit of Zelenci having been even greener in the rain ...
 📍 Preparing for otter section on the Institute NERI, Denmark

LIFE IS OVER — WHAT REMAINS FOR THE FUTURE

What can we establish in the end of the project, using in next or to be used by colleagues in similar projects?

While the goals and actions of the project LIFE AQUAVIVA are in line with the mission of the project applicant, Institute LUTRA, it will not be difficult to continue with project activities in the future. Financial sources are exploited, however, new sources in the times not being in favour of nature conservation and non-profit operation are not easy to assure. To continue with the activities we will try to find co-financiers, sponsors or donors with the right feeling for nature conservation. Yet, some good will and understanding of ministries, local communities and other public services will be necessary, too. With some of these, for example, Municipality of Ljubljana and some local communities in Goričko (Gornji Petrovci) our cooperation is already well running whereas others don't show enough interest.

Our organization is not profitable with the reason. Additionally, it's operating in public interest, so we will do our best to enable the continuation of project activities with the money earned in the market. More, we are obliged to return a bank loan under same conditions as every other business company is and offering the mortgage on the private house for insurance loans ... This is the illustration of attitude the society shows for non-governmental organizations which put every effort into attracting some European money to Slovenia — for conservation of nature, our common public good.

Before all, we would like to continue with nature education days and all kinds of nature workshops for different age groups of children and youths, from kindergartens to university. When activities are part of our project, therefore free of cost, there is a lot of interest for such events in the schools. However, when the project is over and workshop is to be paid, the interest is much lower although the activities remain the same.

We will communicate also in the future, will maintain project's website as well as Facebook and Twitter; we will report about news and try to answer as many questions about water biodiversity as possible. The educational and information materials will be further available on the project's website, also in paper form in the applicant's office as well as in the Centre AQUALUTRA in Goričko.

Otherwise, organizations devoted to nature conservation, must reconcile themselves to the fact that with public awareness rising they are competing with professional advertisers paid by rich companies. Not-for-profit logic in today's world of instant, materialistic oriented consumerism has modest possibilities versus huge profit-oriented companies. Nevertheless, the advertising on public buses and shopping centres, up-to-date work on websites and social networks, participation with an information stand and lectures in 30 fairs and exhibitions, 60 nature education days, 8 own exhibitions and other events — and a lot of this recorded in press and in film — all these had to be noticed. The project LIFE AQUAVIVA at its ending is 31 % more recognizable in public than in the beginning. Therefore, we conclude with the reason that for the same percent, our project has raised the public awareness: the term biodiversity in the year 2014 is for 34 % better known as in the year 2010; the awareness, biodiversity loss



is a serious problem has increased for 36 % although people think that in the year 2014 they are worse informed about this than they were in the year 2010.

Our experiences about LIFE project, above all the present one, testify that connections with the institutions and individuals not foreseen in the application but born spontaneously in the course of the project work and gathering are much stronger and long-lasting than those foreseen in the project application. Comparable with this, also the results are more delightful and their lastingness assured. No nature conservation campaign foreseen in advance would exceed the effect in fashion circles achieved by tiny algae — diatoms which under electronic microscope had reached the size which "has fallen into the eyes" of designer; in original and sustainable knitwear of Draž they began a new life and made the rounds of all the fashion runways. This was simply not predictable. The story deserved an epilogue in the *Catalogue of the exhibition* — for tiny diatoms not to get lost rather to stay with us, who have interknitted in the project, and to grow further also after the project LIFE. ■



WHO WAS WHO IN THE PROJECT LIFE AQUAVIVA

LIVE WATER – FROM BIODIVERSITY TO THE TAP

Layman's report of the project LIFE10 INF/SI/000135

ALIFE project is a big challenge. This is especially true in case of small organizations, and especially in case they are nongovernmental. The obstacles first seen as unbeatable could be overcome with an excellent project team. Sometimes, it is simply shortage of energy for going on, a low spiritedness and desperation prevailing. A friendly support of a collaborator knowing every detail of the project and also all hidden desires, only with a meaningful look and coffee at the right time makes a miracle. In the end, also the joy is common and therefore more precious. For an excellent work on the project and persistence in the critical moments there were collaborators of worth: Tatjana (project administrator, responsible also for the financial part of the project), Marjetka (websites, social networks, work with schools), Petra (workshops, stands, lectures), Igor and Tomaž, all coming from the Institute LUTRA. For the actions of IZVRS, above all water models, Gorazd, Maja and Iztok were looking after. Buses of "biodiversity" were supervised by HOPA, for communications Mitja was responsible. All collaborators and friends could not be mentioned by names, however, without them, the project AQUAVIVA wouldn't be like it was.

Sincerely thanks to all of them. Special thanks for unselfish work to all the three girls from the team, who in the last project year have become young mothers and forever changed LIFE into the life itself. ■

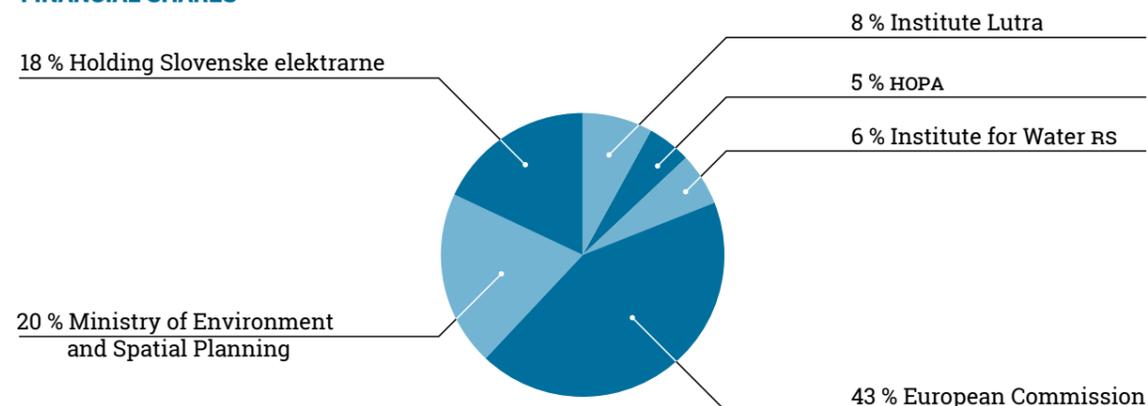


For the life after LIFE it is well provided. Tatjana and Martin, "the result" of the last project's year, on the final event.

BRIEFLY ABOUT THE PROJECT

Beneficiary	LUTRA, Institute for Conservation of Natural Heritage Postal address: Pot ilegalcev 17, SI-1210 Ljubljana, Slovenia Office: Opekarska 11, SI-1000 Ljubljana, Slovenia Branch office: LUTRA PANNONICA, SI-9206 Križevci na Goričkem, Slovenia www.lutra.si
Project coordinator	Marjana Hönigsfeld Adamič, B. Sc. Biol. e-mail: marjana@lutra.si
Contacts	Telephone: 00386 1 429 31 70 Faks: 00386 1 429 31 71 Mobile: 00386 41 705613 e-mail: info@lutra.si
Project Website	www.aquaviva.si
Budget	Total budget: 548,141 € EU contribution: 235,314 € (43 %) Share of MOP: 109,628 € (20 %) Share of HSE: 100,000 € (18 %)
Partners	Institute for Water of the Republic of Slovenia HOPA, Advertising Studio Co.
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Samo Podobnik with his camera was member of the project LIFE team for the second time. Thanks to him, all important project events are recorded with camera for dissemination. Zvone Kosovelj and Dušan Antolin with devoted work from every publication have done their best. Thank you all.

Marjana Hönigsfeld Adamič,
Project coordinator LIFE AQUAVIVA

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