LIMNOS, Company for applied ecology
Požarnice 41, 1351 Brezovica pri Ljubljani
Tel/Faks 01/ 365 15 07
E-mail: info@limnos.si

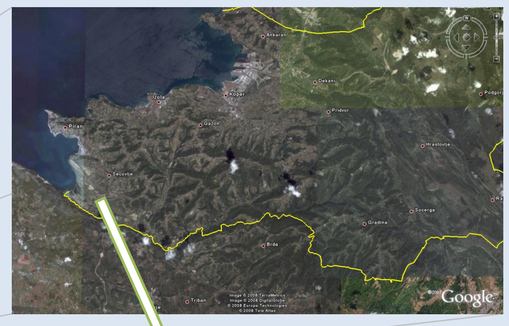
Learning in nature - experiences from Slovenia

Participants:
Ms. Gabrijela Dolinšek, Ms. Irena Kodrič Pastori, Ms. Klarisa Marc, Mr. Peter Grbec, Primary school Anton Ukmar, Koper, Slovenia (Teachers from Slovenia)
Assist. Prof. Dr. Tjaša Griessler Bulc, Dr. Aleksandra Krivograd Klemenčič, Ms. Darja Istenič, Limnos Company for Applied Ecology Ltd.

OSNOVNA ŠOLA ANTONA UKMARJA KOPER
SCUOLA ELEMENTARE ANTON UKMAR CAPODISTRIA
Pot v gaj 2, 6000 KOPER - CAPODISTRIA

Primary school Anton Ukmar Koper, Slovenia

Presentation headmaster: Ms. Gabrijela Dolinšek
565 pupils
Children age from 6 to 15
35 classes
86 staff memebers
9 years of compulsory education
3 cycles – 3 years each cycle



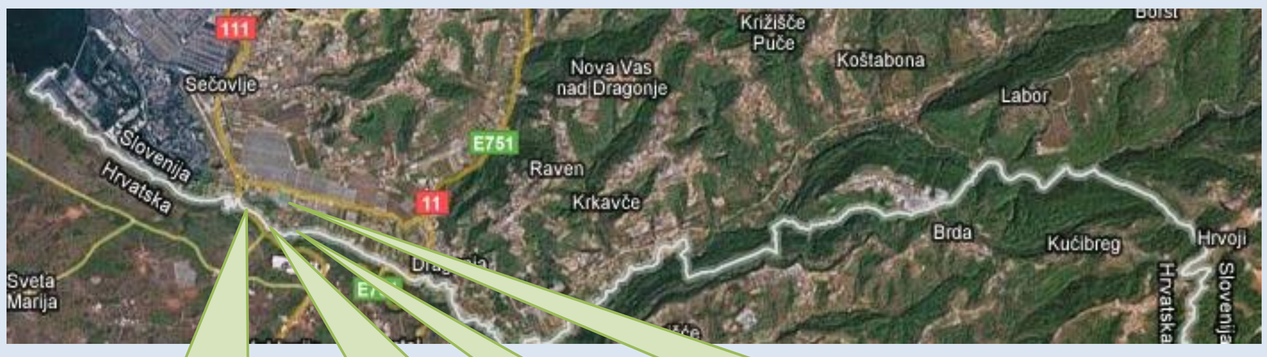
The Dragonja valley

LOCATION OF THE LEARNING PATH

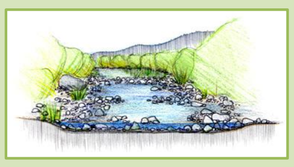
The learning path Dragonja is placed along the Dragonja river in the Slovenian/Croatian border region of the Adriatic coast. Mediterranean regions including Adriatic coast are home to an amazing floral and faunal biodiversity. However, rapid changes in the regions are affecting these ecosystems. The Dragonja river valley is one of the rare naturally preserved valleys in the Mediterranean with many natural or semi-natural phenomena still existing. Its meanders, pools, paddles, banks and marshes are inhabited by different plant and animal species and communities, many of them are rare or endangered.

THE VISIT POINTS ON THE LEARNING PATH

DRAGONJA RIVER
Natural aquatic and waterside ecosystems of the Dragonja River function in such a way that they mitigate severe floods in case of strong showers. Their self-cleaning capacity prevents the results of enormous input of alochthonous substances and human activities.
At the same time, these ecosystems provide habitat for a diversity of plant and animal species. These functions are performed by numerous ponds, rapids, cascades, gravel deposits, riverbed overgrown with water plants, numerous ditches and branches and diverse waterside vegetation.



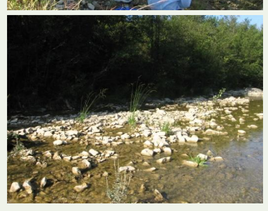
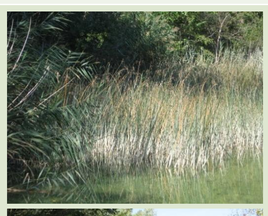
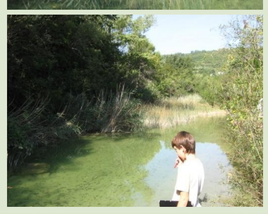
Pond



Gravel deposit

Reed bed

Constructed wetland

TYPE OF ECOSYSTEM	FUNCTIONS	HABITAT	PICTURES FROM THE LEARNING PATH
POND	• water retention and compensation of hydraulic peaks • sedimentation of particles • removal (retention) of toxic and nutrients	plants, amphibians, and fish; aquatic and waterside invertebrates	
GRAVEL DEPOSIT	• water retention • purification (filtering, retention of substances, decomposition of organic and toxic substances, oxygen enrichment)	algae, plants, aquatic and riparian animals	 
REED BED	• purification (addition of oxygen, filtering, decomposition of substances, removal and/or immobilization of toxic substances)	algae, plants, aquatic and waterside, animals, rare plant and animal species; spawning and nesting grounds	 

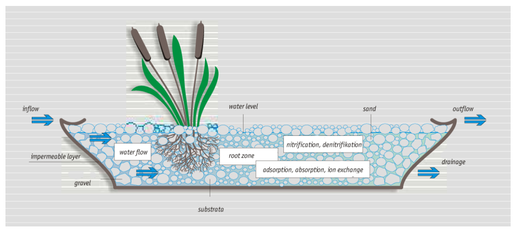
CONSTRUCTED WETLAND DRAGONJA

Constructed wetlands are natural devices for cleaning polluted water. We use them to clean:
municipal waste waters (settlements, tourist centers, natural parks), industrial waste waters, landfill leachate and precipitation outflow from roads.

They are made up from media (sand), with microorganismis and plants. Polluted water which comes into the CW is cleaned by microorganisms and plants. Bigger pieces in the water, which plants and microorganisms can not use for living are suspended. At the end from CW comes cleaned water, which can be used for watering green plots, washing cars, putting out fires or we can collect it into a decorative pond.

TEACHING UNIT PLAN "CONSTRUCTED WETLAND"

The teaching unit plan "Constructed wetland" is developed around a classroom model of a constructed wetland, with the special focus on the fact that constructed wetlands represent an attractive alternative for water recycling especially in arid regions with water scarcity.
The pupils learn that constructed wetlands are a simple technology, where principles of nature are used to clean wastewater (soil filter, degradation, plant take-up).



SCHOOL PROJECTS

SCHOOL POND
SCHOOL ORCHARD
OLIVE GROVE
LITORAL
TANATOCENOSIS
PARK – TREES, BUSHES, HEDGES
COMPOSTING
ASTRONOMY
VINEYARD