

International conference of KASZÓ – LIFE project 28/05/2018 – 30/05/2018, KASZÓ
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LIFE14 NAT/SK/001306 Danube floodplains

Time period: 1.8.2015 – 31.1.2022

Coordinating beneficiary: BROZ –Regional Association for Nature Conservation and Sustainable Development

Associated beneficiaries:

- Water Management Construction state enterprise
- Water Research Institute
- National Forest Centre
- Duna Ipoly National Park Directorate













- Slovakia project area large area of Danube river branches in inundation from Dobrohošť Sap, Danube river arms near Kľúčovec a Číčov, Čiliz creek, and wetlands in alluvium of river Váh, Ipeľ (Ipoly)
- Hungarian project area NP Duna Ipoly Haros island, Racalmasi island near Budapest





"LETS REVIVE THE HEART OF THE DANUBE FLOODPLAINS"











Pictures of fixed weir's system























Pictures from the project area now











- y.1997 Gabcikovo water dam in operation
- Inflow in Dobrohošť winter 20 m3/s, summer 30 m3/s.
- Regulated floods for 6 years no floods administrative obstacles, resistance of state institutions
- Finally this May 2018 flood but only 70 m3/s
- In comparison average flow 2000 m3/s in Danube



Project objectives



The main objective:

- Restoration of Danube floodplain habitats and introduction of sustainable management
 - improvement of water regime in the vast river branch system
 - and direct restoration interventions to the habitats (restoration of river arms, wetlands and forests planting, invasive species elimination, support of natural restoration etc.)





Specific objectives

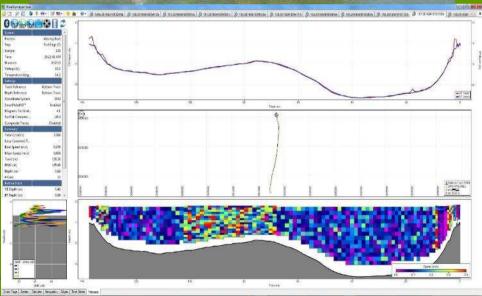
- to optimize water level and distribution of water within the Danube river branch system and in Danube floodplains;
- to restore water regime of selected disturbed localities;
- to restore targeted habitat types and to improve their conservation status of 91 E0 alluvial forests with Alnus glutinosa and Fraxinus excelsior,
 *91F0 Riparian mixed forests, 6510 Lowland hay meadows
- to increase biodiversity
- to improve the conservation status of the last remaining fragments of non-forest habitats within project site, especially alluvial meadows and to set-up their sustainable regular man











Expected project results

- Minimum 5 weirs will be reconstructed in order more dynamic water regime was established and more water was brought into the system
- Introduction of the system of regular flooding events in the project area!
- Improvement of water regime on 1850 ha
- Minimum 2 isolated river arms will be reconnected to the main river flow - the length of restored arms in 4500 m
- 4 wetlands will be restored with area of 37 ha
- 57 500 native trees will be planted (45 000 in SK on 45 ha)





The first river arm was restored in 05/2016- Kráľovská Lúka at Baka -cca
 190m – we are now preparing next stage







Before realisation – Kráľovská lúka





Kráľovská lúka – Danube river arm – historical map

Map from 16th – 17th century





• 19th century – the arm disconnected from river Danube

Ortophotomap from 1950

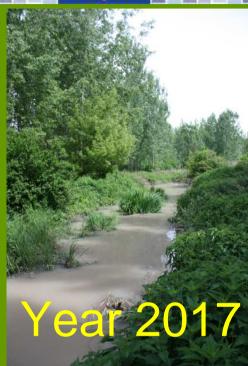




The river arm is from that time most of the time dry







Year 2018 _ No water – the state forester made the barrier from the soil to stop the inflow – because beavers occured







- 1.Restored dry river arm lenght 430 m (dark blue)
- Restored flow capacity and prolonged time, when the river arm is watered - 440 mlightblue – water was present 6 months and now whole year
- 3. restored long term
 periodical wetlands
 (Dobrohošť +
 Kyselica) cca 0,95 ha
 (it is not exact number
 needs to be measured
 blue lines
 - I. Restored potential of flooding of hard and soft wood flood plain forest (Dobrohošť, Kyselica) cca 16 ha (it will be proved by higher flooding) green lines



Inflow into the

Photodocumentation

arm





















June 2017



November 2017





C.3 Preparation of the native tree seedlings

- After identification of trees as sources of genetic material for reproduction in the project area, the preparation of seedlings started in the year 2016.
- These species were reproduced in the nursery of NLC in Gabčíkovo: black poplar (*Populus nigra*), lime (*Tilia cordata*), oak (*Quercus robur*), wild apple tree, wild pear tree, lime, black alder (*Alnus glutinosa*) and field maple (*Acer campestre*), (*Fraxinus excelsior*), (*Salix alba*), (*Populus alba*).
- The further propagation Cerasus avium, Ulmus minor, Carpinus betulus, Fraxinus excalisior, Fraxinus betulus, Prunus racemosa, Crataegus oxyacantha

C3. Planting of tree sedlings in NLC Gabčíkovo in 2016











C3. Planting of tree sedlings in NLC Gabčíkovo 2017





Status of the forests in the Danube floodplain area

- 80 90% of the forest area is covered by euroamerican poplar monocultures.
- Only 10 20% is native floodplain forest

In upper part – no poplar seedling survive – 5 years planting no success





Differences between native forest and poplar monoculture:

Salix sp.

Euroamerican poplars









- Area of 4,5 ha— cca 50 % of plants survived too dry conditions Clear cuts do they make sense for the future because of climate change?
- 3375 pcs planted, composition:
 - Alnus glutinosa 210 pcs
 - Salix alba 210 pcs
 - Populus alba 2245 pcs
 - Populus nigra 710 pcs





Future of forest management?

"Forests may induce local precipitations".

Questions:

WOOD vs. RAIN

WOOD vs. FOOD

WATER vs. ELECTRICITY

WATER vs. DROUGHT

RAIN vs. DROUGHT

C.5 Re- grassing in UEV Čiližské močiare

- Total restored area – cca 23 ha on wet fields in copperation with local farm PD Sokolce



C.5 Restoration of lowland meadows and non- forest habitats

- The first restoration by mulchin gstarted in NPR
 Apalsky ostrov (SKUEV Dolnovážske Luhy) on 26.11.
 20.12.2017
- Road restrain (ramp) was installed on 24.11.2017









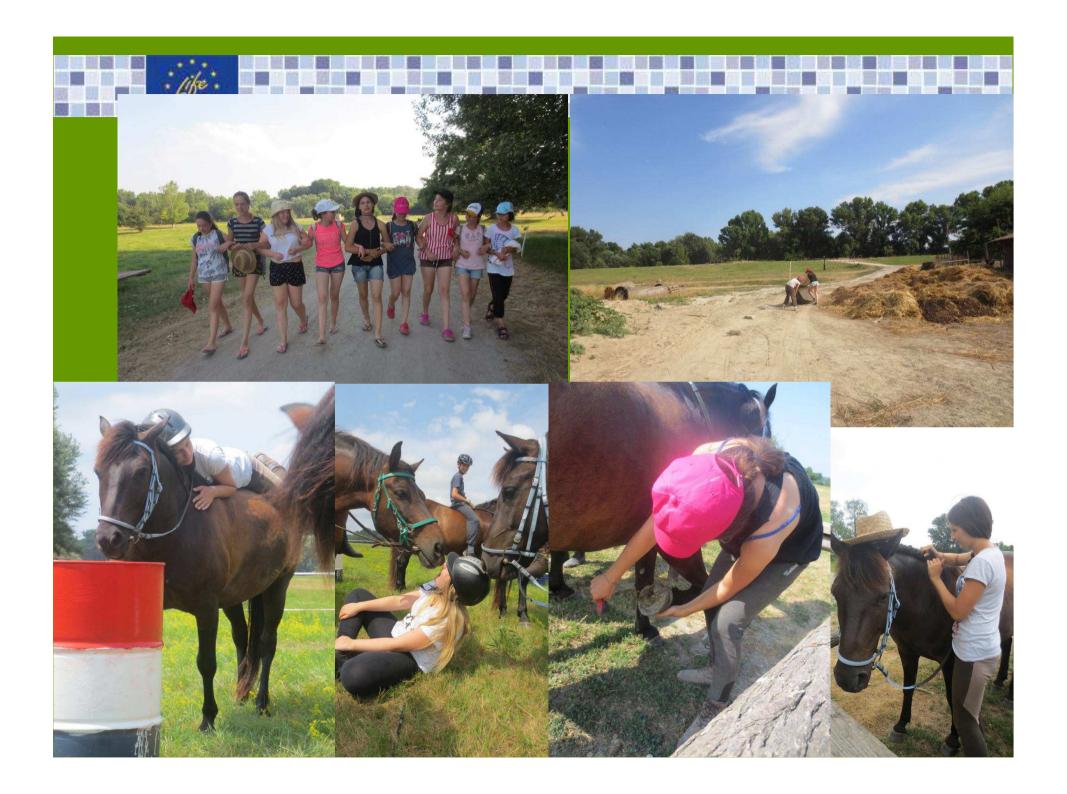
For visitors and tourists (on bicycles or by car) - we are developing the
infrastructure in the Danube Island - Velky Lel (NAGY LELY)— camping
place with toilets, showers, shelter, permanent exhibition about Danube
area, Eco farm, tourist trails with panels, canoe trips, trips on horses
backs or stagecoach dragged by horses

















STAGNANCY

MOVEMENT



Thank you for your attention!