

# **Initiative “Place a Stone in a Stream” as a Method for Local Stakeholder Motivation and Involvement in River Restoration and Maintenance in Latvia**

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# Location of Republic of Latvia within the Baltic Sea Catchment and dominating Landcover





# General Information

- Area of Latvia 64 000 sq.km
- 12.4 thousand watercourses and 2000 lakes
- 777 streams longer than 10 km
- Total length of rivers about 37 500km
- Water (lakes & rivers) covers about 2,4% of Latvia
- About 30% of total stream length are meliorated (Deepened, straightened etc)
- Majority of small and medium size rivers are private (land beneath the water surface)
- Beavers 100.000





# General information. River Network





## Typical appearance of medium size river in Latvia.





# Problems: Eutrophication, Sedimentation, Tunnelling, Beaver



## Basical Starting Position:

- Private ownership of majority of rivers
- Rivers as an open systems.
- Two river banks, two owners, two Kings...
- Need to find uniting motivation to work together.

Mission impossible!

But....

# Initiative “Place a Stone in a Stream”



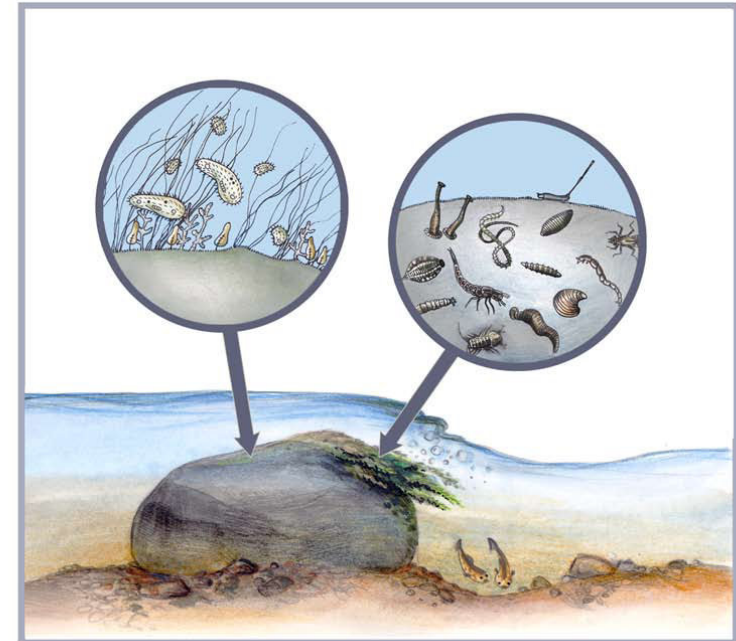


## **The Aim of the Initiative is Broader than the Title:**

- **Support and increase Biodiversity in Rivers;**
- **Improve River functionality and selfpurification capacities (Green Structures);**
- **Improve functionality of River Coastal zone and maintain river landscape;**
- **Adapt possible Climate Change impacts on to the river ecosystem;**
- **Raise citizen awareness and motivation through practical involvement**

# Stone Phenomenon

- **Stone surface covered with “biofilm” acting as wastewater treatment unit**
- **Stones as an mechanical aerators (especially during summer periods with low natural oxygen saturation)**
- **Stones as a diverse microhabitats**
- **Possible/innovative Climate Change adaptation tool.**





## 5 – 10 sq.m riffle area transforms wastes generated by one person



# Rationale

- Initiative embraces different Activities and their combination suitable for each concrete river case and the problem to be solved - maintain hydrological processes (runoff), coastal stability and sediment flow, reopen suitable river bed stretches, increase selfpurification capacity, increase biodiversity, fish stocks etc.



# Actors

- Fishermen Associations
- Local landowners
- NGOs
- Water tourism activists and developers
- Local Municipalities

# Reopening migration for fish, invertebrates and canoeists. Activities of Salacgriva fishermen Club in River Vitrupe





# Involvement of local people in small activities for flood mitigation and biodiversity maintenance





# Involvement of NGOs in Restoration Activities (R.Jaunupe)





# Pragmatic interest of Water Tourists to join (photo from [www.laivas.lv](http://www.laivas.lv))





# Annual Theoretical Training of interested persons followed with practical activities in river





# Students and even Children joins their parents





# Educational “side” Activities



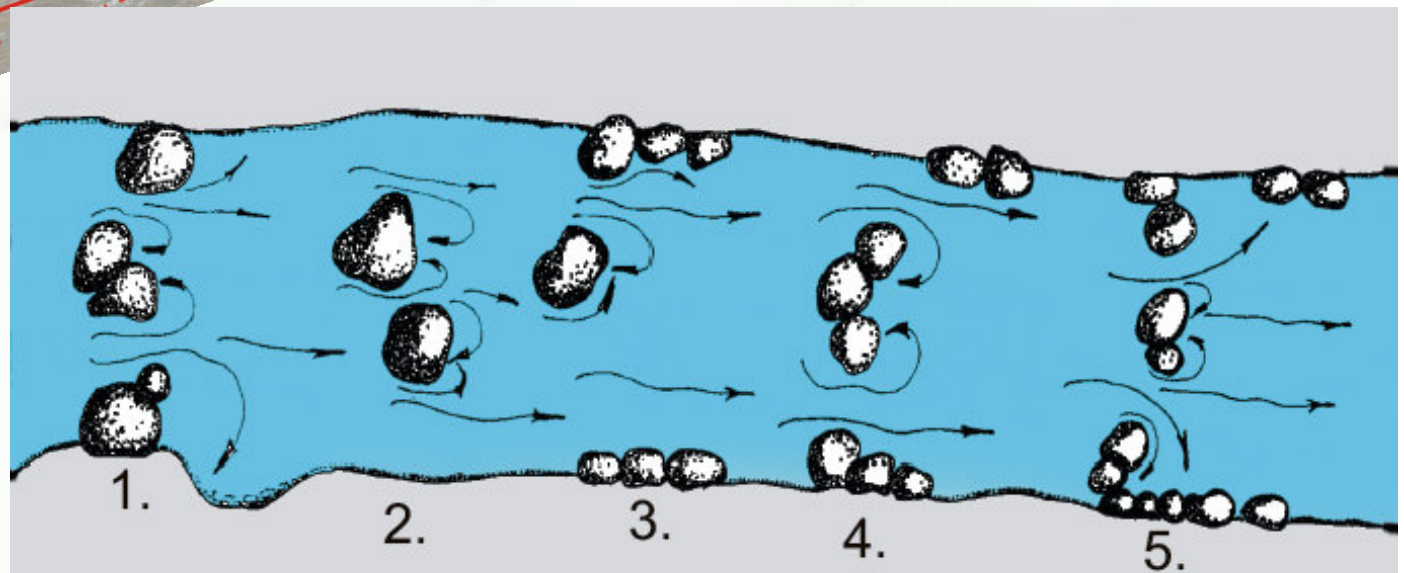


# Halting Bank erosion and renewing stony areas





# Leaflet produced on processes in rivers and how to install stones



1. Upē ievietota akmeņu rinda veicina nenostiprināta krasta izskalošanu - eroziju.
2. Atsevišķus akmeņus (diametrs > 30 cm) izvieto upes centrālajā daļā tā, lai tie neklūtu par upes nestā materiāla „ķērājiem” un nenosprostotu vairāk kā 1/3 upes platuma.
3. Leļpus akmeņu veidojumiem krastā ir jāizvieto palielus akmeņus (diametrs > 30 cm), lai novērstu krasta izskalošanos - eroziju.
4. Lokveida akmeņu salikums - iespējamā zivju nārsta vieta.
5. Spārnveida akmeņu salikums, kurš novirza galvenās straumes virzienu tā pasargājot pretējā krasta izskalošanos.



# Spread of Initiative . Mineral Water company “Mangali” supports 5 clean-ups in different parts of Latvia, 2012





# Improving hydrology and morphology of lowland stream. R.Vircava





# Head of Jelgava parish (one of biggest Latvian parishes) steps into river and becomes fascinated





# Two year later 5 cleanups are initiated by the Jelgava parish with follow-up in other rivers





# Involvement of Local people and their knowledge





# Local Restoration Activity becomes an Event





# People in National Folk dresses in River Balda





**Local inhabitants, even Member of the Parliament (without trousers), as well as the Head of one of four Planning Regions of Latvia (in Yellow with saw) are joining caring for our Waters**



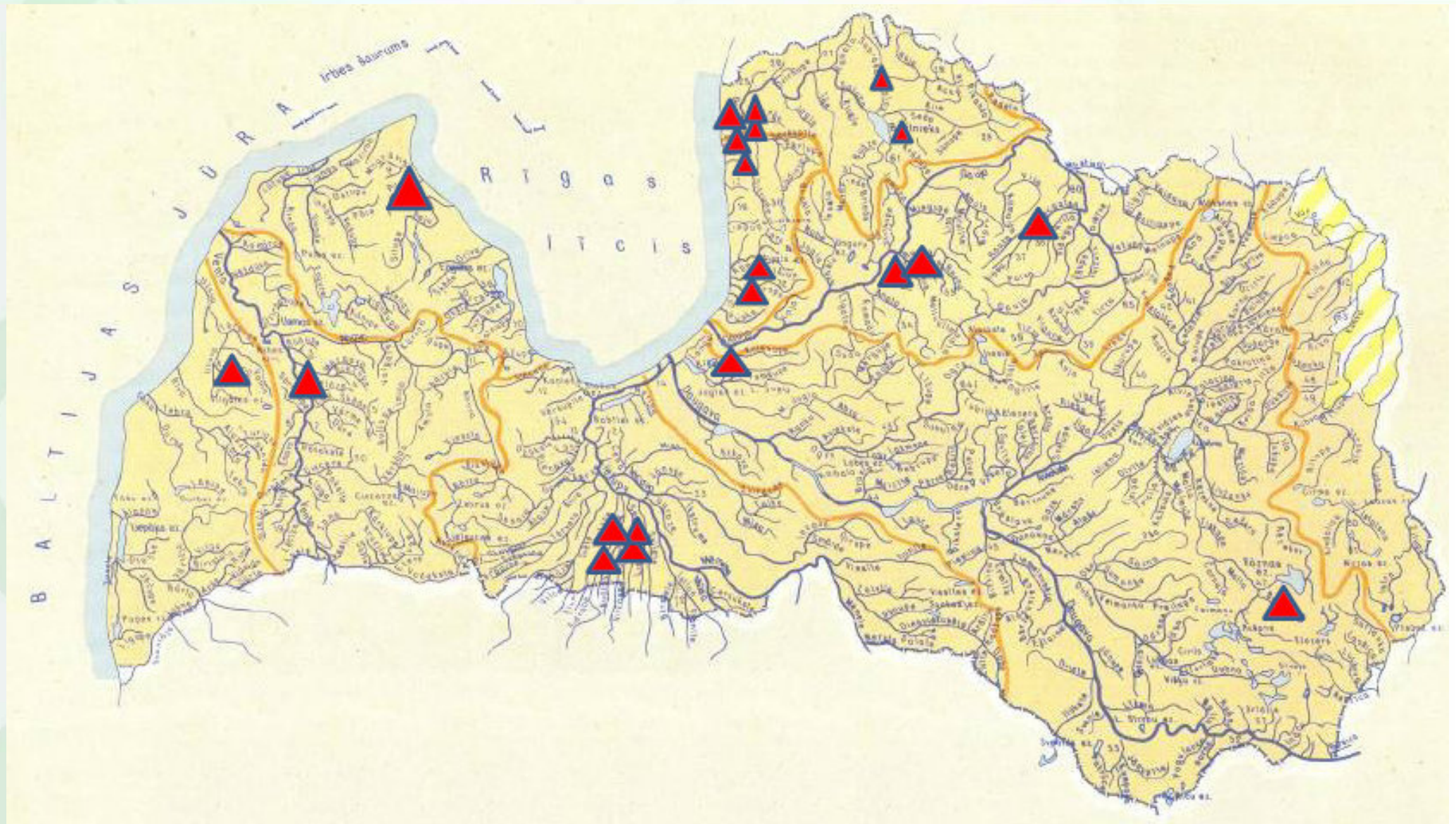


# Introducing the Initiative to the President of Latvia Dr.V.Zatlers 30.05.2010.





# Initiative realised during 2012.-2013.





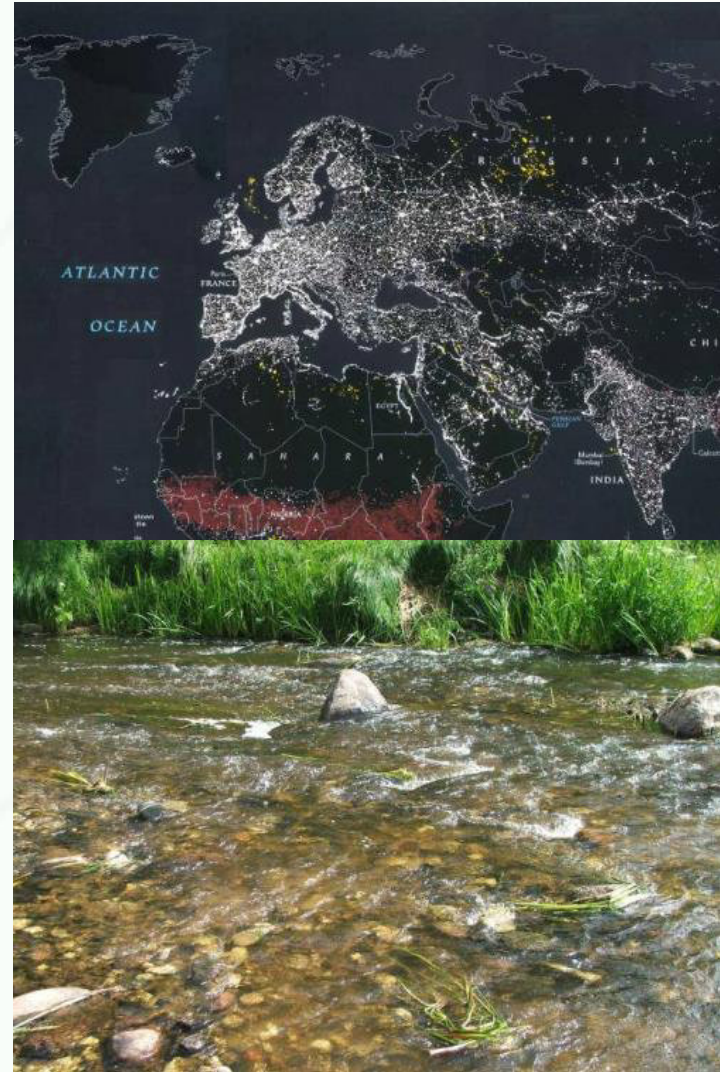
# All are Winners. Result is Visible





# Our prospects

- Equipped with knowledge and right motivation we ourselves can improve biodiversity and landscape of our surroundings, even adapting our rivers to the Climate change impact
- And we are not small screws in the big World. There is sense in what we are doing . We are needed here.





# Thank You!

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