GREEN BLUE RHINE ALLIANCE

Summary & conclusions of the 2nd workshop
'Floodplain development'

8 November 2018

Fort Pannerden

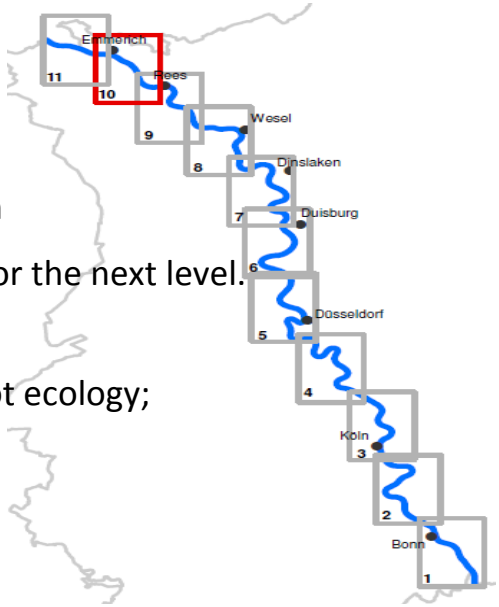
T. Buijse (Deltares): *Side channels in large European rivers*

- Since the 2000's side channels have been reconnected or restored over Europe, e.g. in Hungary, France, Netherlands and Austria
- Floodplain development in the Netherlands is constrained by dikes
- Floodplains are disconnected from river dynamics due to channel incision and floodplain aggradation
- Side channels offer opportunities for ecological improvement together with flood risk reduction
- Adjustments to pace down sedimentation are important in side channels
- In the Netherlands several side channel projects have been carried out for "Room for the River" and WFD
- They provide nursery and spawning habitat for rheophilic fish species
- Many opportunities, do not consider it as obligations, adapt to the local conditions
- Make use of international experience

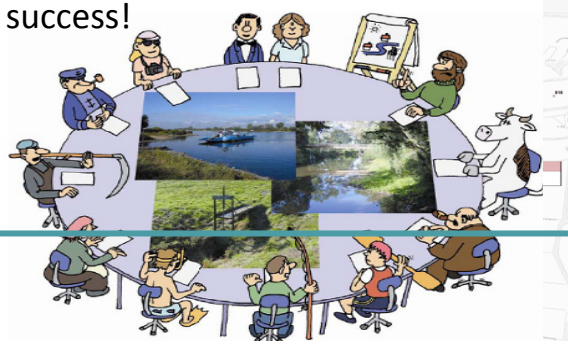
J. Van Rooijen (*State Forestry Agency*): *Lessons learned from a finalised floodplain development-project*

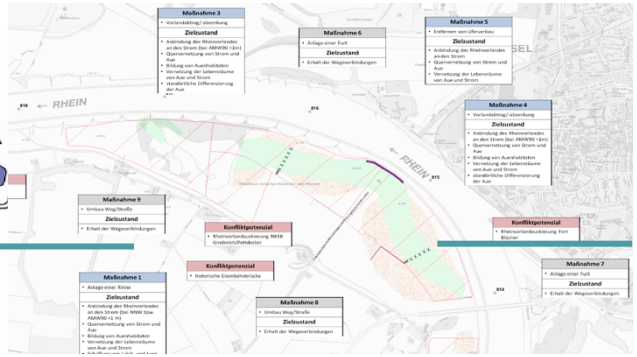
- Don’t despair if it takes nearly 20 years to realise a project and 4 project leaders, the end result is what counts.
- Project complications can be due to budget cuts, complex multi-ownerships and conflicting interests (ecology, flood risk protection, shipping, agriculture).
- Be clear, communicate, involve stakeholders at an early stage and make use of linking opportunities.
- The Water Framework Directive offers budgetary opportunities.
- Take additional budget into account to allow for to adjustments after realisation.
- Be patient, let nature take its time to develop naturally, only intervene when necessary.
- Ownership situation and soil contamination can delay the progress in project realisation.

J. Klingel (Bezirksregierung Düsseldorf): *Planning side channels and floodplain development in North Rhine-Westphalia for the EU-Water Framework Directive*



- The plans for secondary channels and floodplain development have already been elaborated and explored along the Rhine in Germany. The master plan is ready for the next level.
- There are communication and collaboration challenges:
  - The Waterways and Shipping Administration (WSV) represents shipping not ecology;
  - Implementation of WFD is no legal ground for expropriation of land;
  - Mining of sand and gravel is strictly regulated to designated areas;
  - The ministry is not yet involved;
  - Conflicts federal vs state government (who is to pay?);
  - There is too little funding;
  - Projects (including excavation) got ‘bad press’ before they were even started.
- Working across borders is the key to success!





M. Van den Bergh (WWF): *Possible future development/ building towards a nature-based and sustainable river system*

- The 'living river' concept increased river nature from 3,000 ha in 1990 to 15,000 ha in 2018.
- New river nature is successful, but needs more incorporation of functions in a sustainable way sustainable (recreation, agriculture, clay extraction, shipping, etc.) .
- There is need for new knowledge concerning;
  - Reasons for limited recovery of certain species groups;
  - Pressures on river ecology (shipping, high water levels, drought and desiccation, etc.);
  - New developments and functions (recreation, etc..).
  - Subsidence of the river bed.
  - Climate-proof rivers (promoting natural processes and sponge function)
- An integrated approach: working with nature, together with governments, navigation sector and, mining industries, and other sectors who want to work jointly on sustainable strategies.
- In the Netherlands clay and sand extraction offers opportunities, in contrast to Germany.
- Manage floodplains in larger units and create connectivity for all functions

Field trip to the secondary channel Klompenwaard


View on the Pannerdens kanaal from Fort Pannerden


Large beaches due to extremely low water levels


Tour guide Luc Jans (RWS) with interpretor


Construction to control inflow into the side channel


Sand has been deposited in the side channel during high discharges early 2018


Large wood in the dessicated side channel

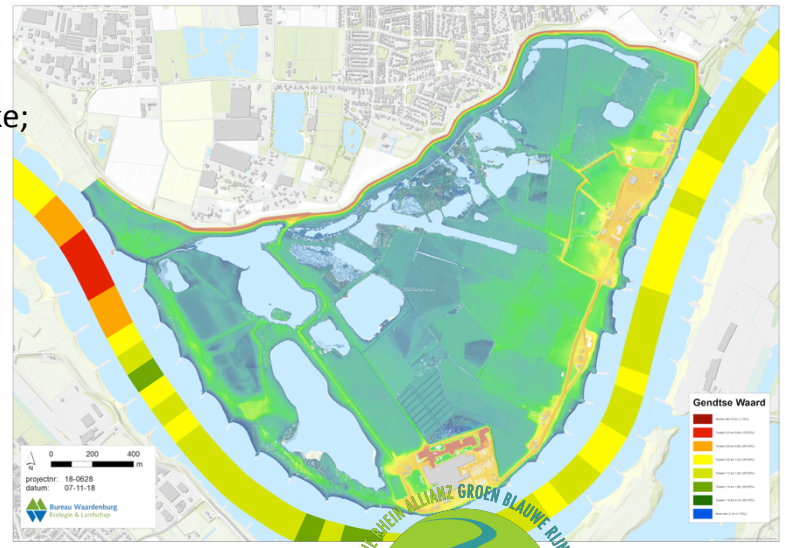
Workshop - summary

Gendtse waard

- Background information:
  - The river is fixed by groynes, summer dikes control floodplain inundation and in the floodplain clay and sand have been extracted.

Potential locations for secondary channels

- Why?
  - Diminishing river bed erosion, improving WFD values, running water without shipping, low-dynamic nature, flood protection and regulating drainage.
- Context:
  - No excavation within an area of 100 m from the winter dike;
  - Constructions (bridge);
  - River splitting point;
  - River bed erosion;
  - Desiccation;
  - Sand mining industries don't want to sell their properties;
  - Balancing high vs low dynamic nature;
  - Ecological values clay pits;
  - Access road brick factory.



Workshop - summary

Gendtse waard

- How:
  - One permanent channel and one temporarily connected flood channel;
  - Narrow channel and regulate drainage;
  - Lower the summer dike to stimulate hydrodynamic processes;
  - Preservation of riparian forest;
  - Preservation low dynamic nature (using a dividing dike and inlet/outlet structure);
  - Filling-up deep sand/clay-pits can be positive for vegetation development, but take care of existing values;

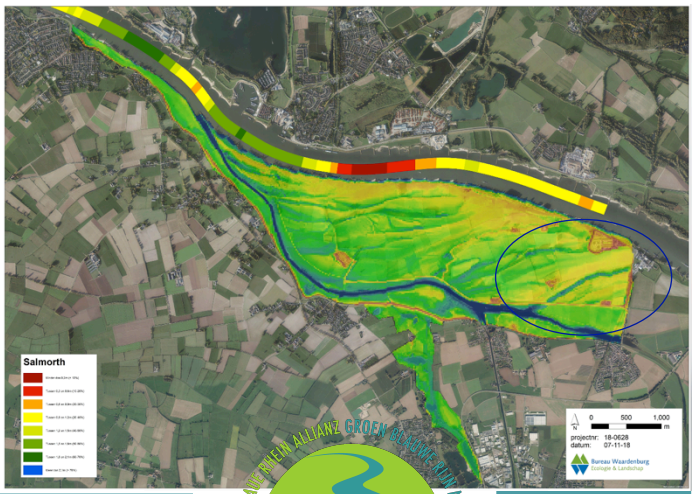
Workshop - summary

Salmorth

- Background information:
  - Former sandy point bar (island) in the river, rather elevated floodplain. One third of the area is natural. River is fixed by groynes for shipping and the connection with the floodplain is low.

Potential locations for secondary channels

- Why?
  - Restoring rivers habitat, spawning grounds for fish, running water without shipping, low-dynamic river nature, flood protection.
- Context:
  - Private ownership;
  - Existing nature is valuable;
  - Poor relation between stakeholders and nature protection (NABU)
  - Not a designated sand or gravel mining location.



Workshop - summary

Salmorth

- How:
  - Reframe plans from creating nature to creating fish habitat;
  - Try to find partners in crime in anglers, the chemical plant (blue green deal), recreation, WWF;
  - Change initiator and create a nature foundation;
  - Start small (small secondary channel in the east);
  - Show stakeholders examples;

Workshop - summary

Kijfwaard

- Background information:
  - Small floodplain, suitable for flood reduction. On the sandy banks valuable riverine vegetation occur, most of the floodplain is in agricultural use. Former plans failed due to fear for transverse flows and sedimentation of the main channel.

Potential locations for secondary channel.

- Why?
  - Fast flowing shallow waters over sand or gravel bed are rare in the Dutch Rhine. Creating such a habitat, protected from impacts of shipping would provide rheophilic habitat for target species.
- Context:
  - Relatively narrow floodplain and channel;
  - River splitting point;
  - Existing nature is partly valuable;
  - Main channel seems to be deep enough to allow some sedimentation in the shipping channel'
  - Not a designated sand or gravel mining location.

Workshop - summary

Kijfwaard

Potential locations for secondary channel.

- Opportunities for fast flowing sandy/gravel channels for rheophilic species
- Little room in the floodplain
- Possibilities for narrow side channels with (small) training dam, providing protection for waves and currents induced by shipping
- Including flow deflectors, such as large wood (trees), in the channel
- Possibility for wooden screens in stead of stone training dam
- Potentially also low-dynamic channels (connected on one side or temporarily)

Wooden screens from trees for river training in the river Lek

Conclusions D-NL

- Targets and approach are identical, but context differs
- Clay and sand mining = opportunity in the Netherlands, at this moment not in Germany
- Including stakeholders as partners early in the planning process may improve acceptance in Germany
- WFD = driving force in the Netherlands, in Germany other ministries are involved in river management, which hampers the process
- A master plan for the whole German Rhine has been prepared, the Netherlands are working on the implementation of the second phase and the preparation of the third phase of WFD measures
- Potential contribution of WWF-Germany for floodplain rehabilitation

- Bilingual (NL-D) workshop with interpreters was effective and successful!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GRÜN BLAUE RHEIN ALLIANZ GROEN BLAUWE RIJN ALLIANTIE