



WATER: COMMODITY OF CONFLICT OR CO-OPERATION



Erasmus+ project
Open Minds Open Borders
Leiden february 2020
EXAMPLES FOR RESEARCH



Potable water – drinking water

Netherlands = low country

Groundwater – salt

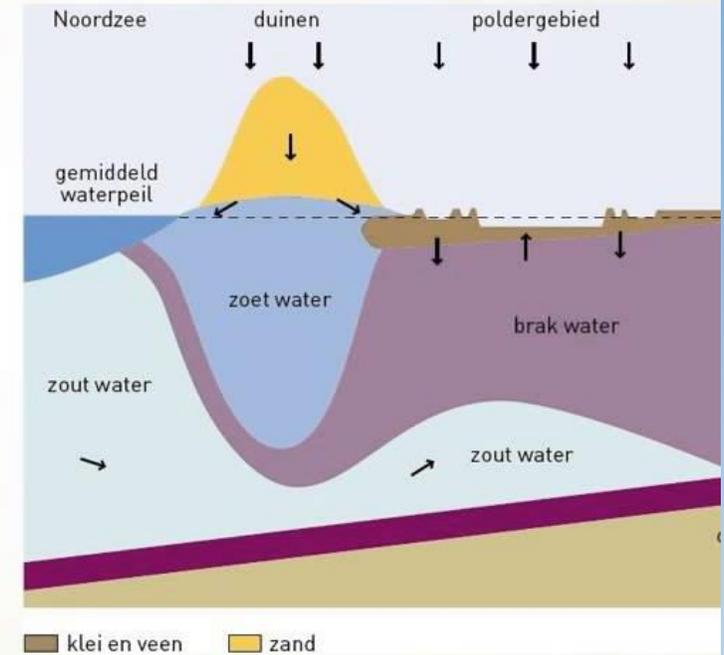
Dunes contain a big reservoir of fresh water

Used for drinking water in Amsterdam / Leiden / The Hague since 1850s

Water from Rhine river is taken to the dunes to keep the storage capacity in order

Zoetwaterwinning

- Naast zeekering is zoetwaterwinning een belangrijke functie van de duinen.
- Onder de duinen bevindt zich een **zoetwaterzak**.
- Het zoete water uit de rivieren wordt **geïnfiltreerd** in de duinen en filtreert de schadelijke stoffen uit het water.
- Het water gaat door de duinen en komt terecht in de **zoetwaterzak**.
- Het zoete en zoute water mengt niet omdat het zoete water lichter is. (dichtheidsverschillen)



Climate Change and Rivers

Irregular precipitation as a result of climate change is a fact

Rivers cannot dispose of their water surplus (Sea level rises)

Dykes cannot be raised with many metres

So we need to give the rivers more space to overflow without damaging property of people



Big companies depend on water

Heineken depends on production of barley and other grain in Spain...

But: Rain in Spain is getting scarcer in the Plain – how to cope?

Heineken is the biggest consumer of potable water in the Leiden area

It has its own sources and pipes running from the dunes to the factory at Zoeterwoude.

What about the cost of all this?



Conflicts in Africa

Egypt depends on the Nile

Sudan controls the source of the river

Sudan suffers from droughts

Builds a new dam

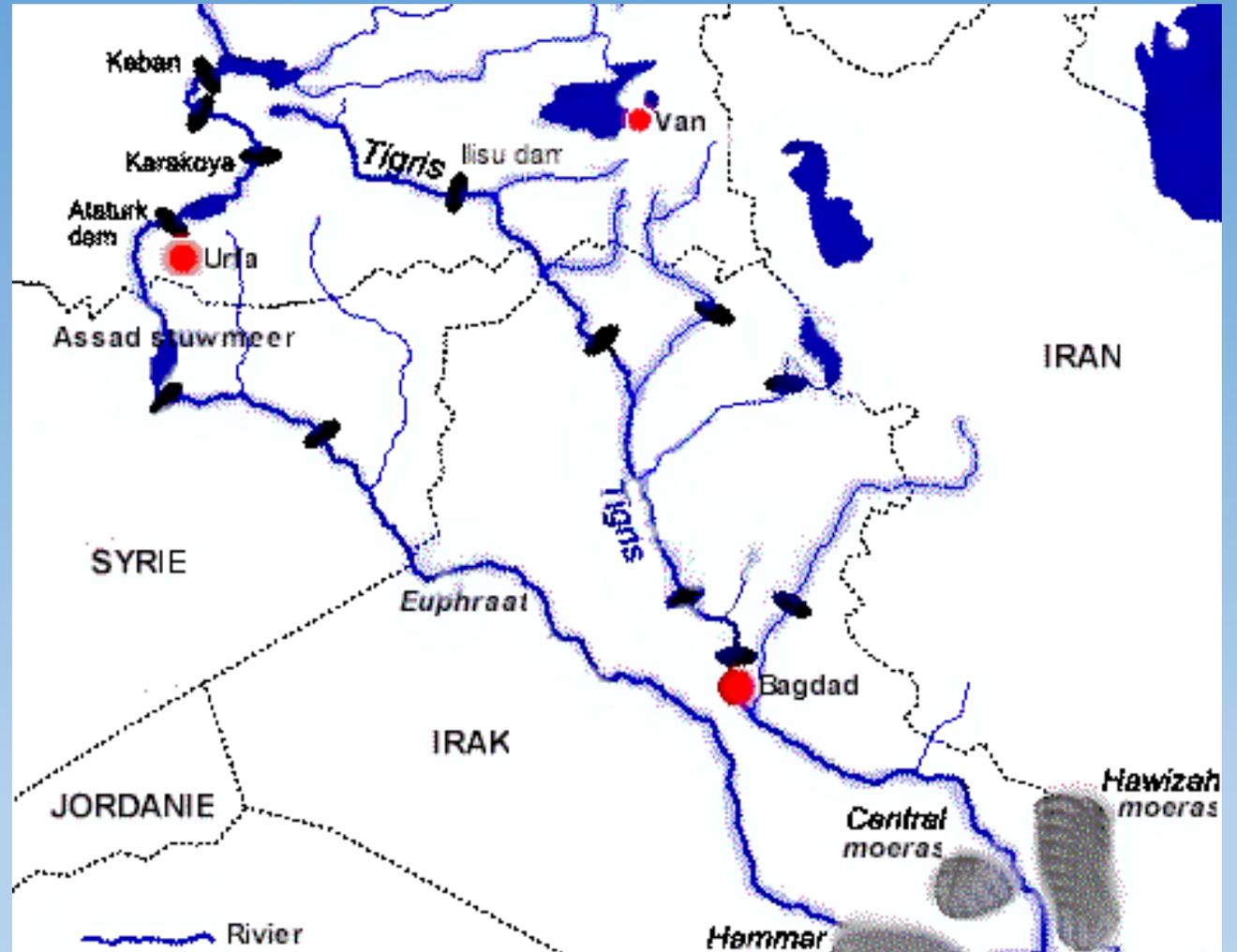


Conflicts in Asia

Turkey controls the Euphrates and Tigris rivers

Syria and Iraq depend heavily on water from Turkey

What happens when Turkey decides to build dams in the river?



Conflicts in Europe

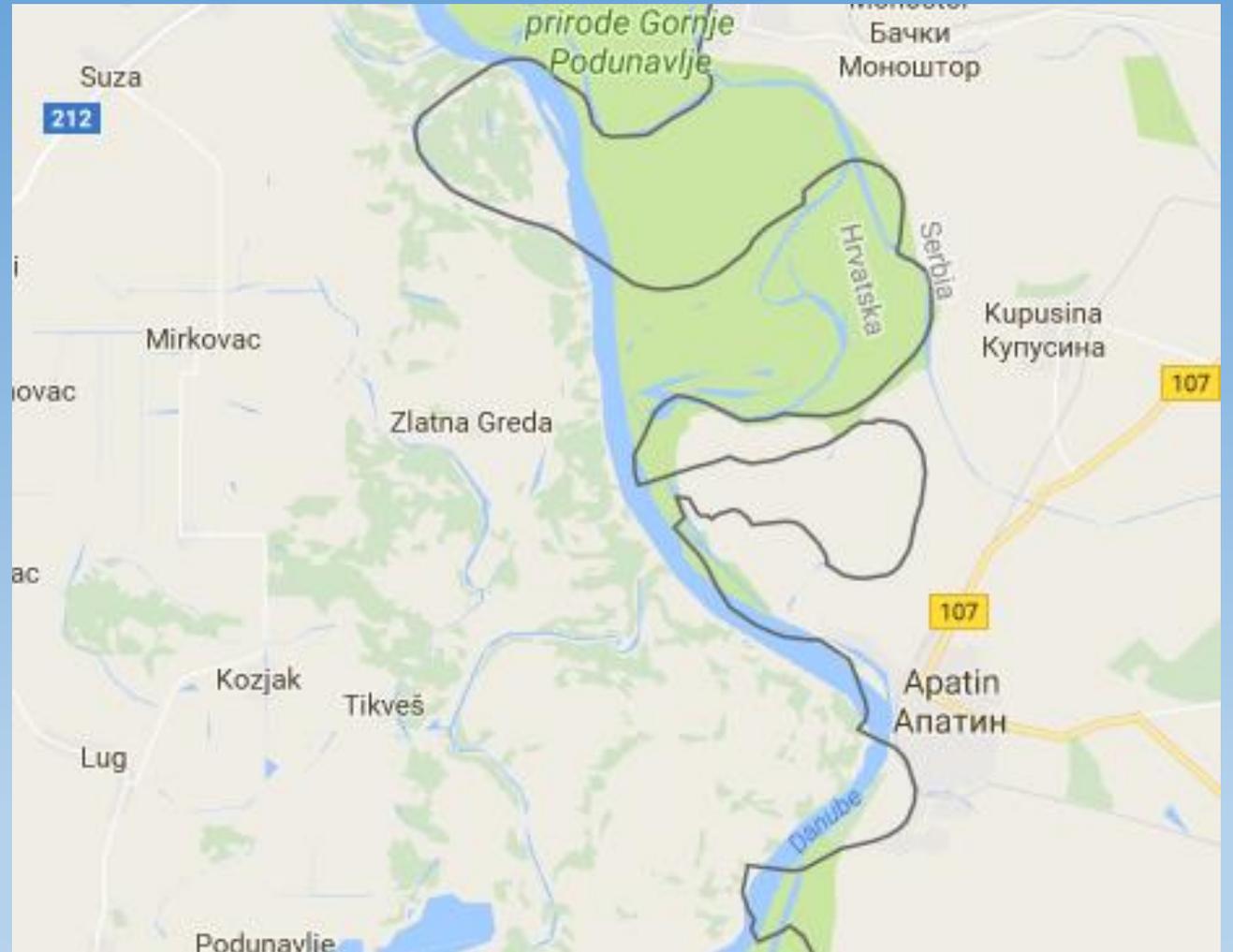
Croatia (left) and Serbia (right) share the river Danube as a common border

Danube changed its course over the last 100 years.

What happens to the border?

Potential Conflict or

Cooperation when Serbia joins the EU?



Cooperation in Europe

River Rhine flows through Switzerland, along Germany and France into the Netherlands

Netherlands depends on the river for transport and drinking water

Industries in Europe used to pollute the river with chemicals

Rhine conferences between these countries are essential to avoid conflicts

