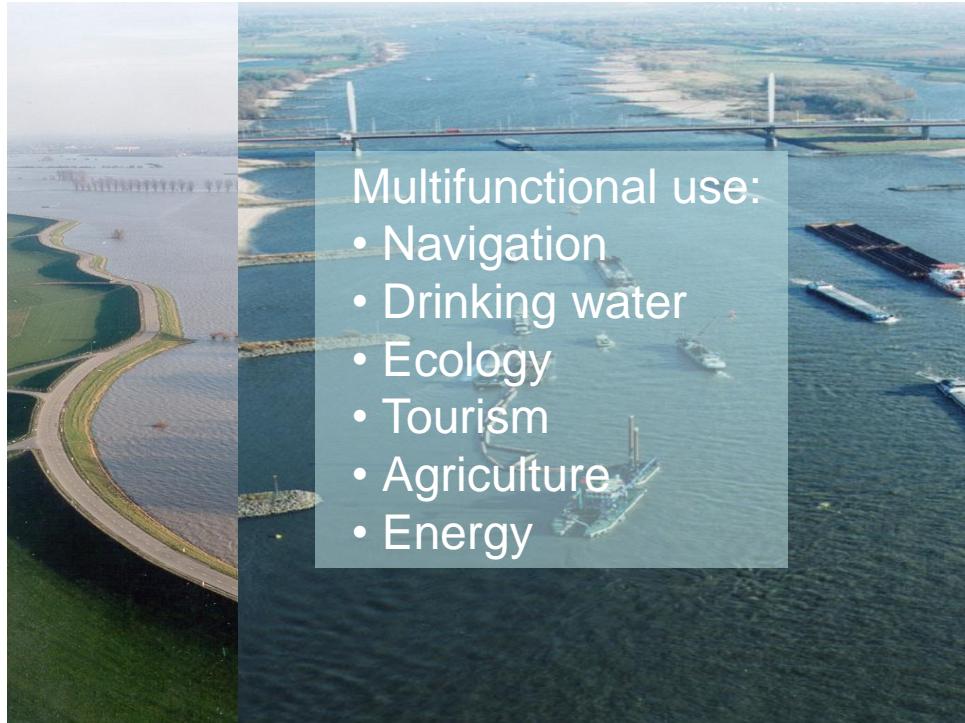




Presentation

- Room for the River
in the Netherlands
- Room for the River
in Valle del Cauca, Colombia

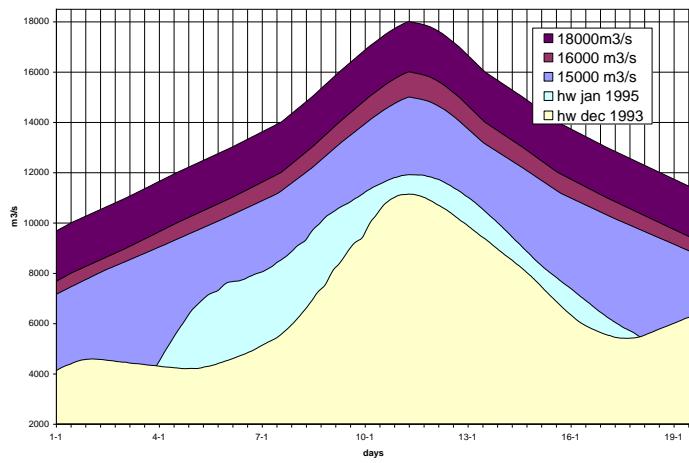


Multifunctional use:

- Navigation
- Drinking water
- Ecology
- Tourism
- Agriculture
- Energy



Actual and future discharges at Lobith





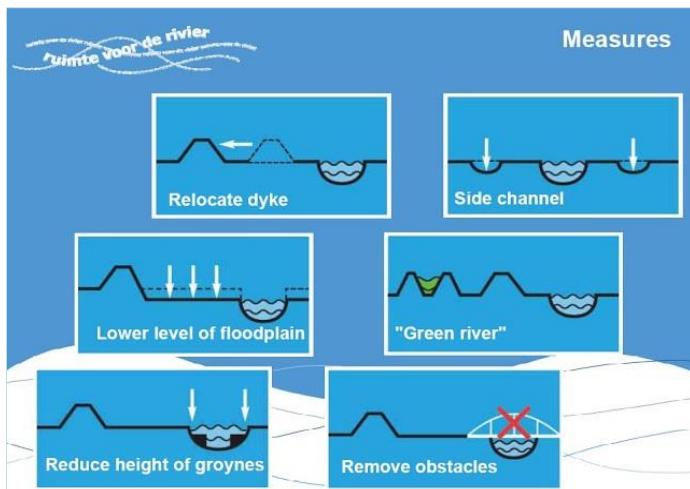
Traditional measures



ARCADIS



The concept of Room for the River



ARCADIS



Key success factors

Objectives framed in a long term vision

The introduction of a specific law (PKB) to facilitate implementation

Designation of a fixed budget of 2,3 Billion Euro's up to 2015

Learning environment for the concept of Water governance (content, procedures and process),

 ARCADIS



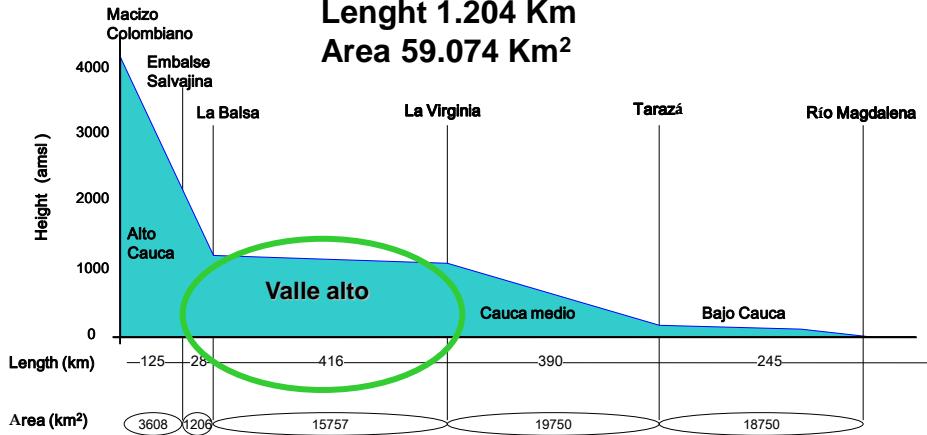
The Rhine and the río Cauca



	Rhine	Río Cauca
Catchment area (km ²)	170.000	63300
length(km) (projectarea)	1233 (±400)	1350 (416)
Countries	6	1 (6 provinces)
Mean discharge (m ³ /s)	2200	2347

 ARCADIS

Catchment of the río Cauca
Lenght 1.204 Km
Area 59.074 Km²



Valle alto
Length 416 Km
Area 15.757 Km²



Antecedents of the project

- Flooding (2010/2011) significant economic losses
- MoU Colombia/the Netherlands 2012
- Including 'Room for the river Cauca'
- Second most important river of Colombia
- Main sugar cane producing region
- Financed by Colombia and The Netherlands



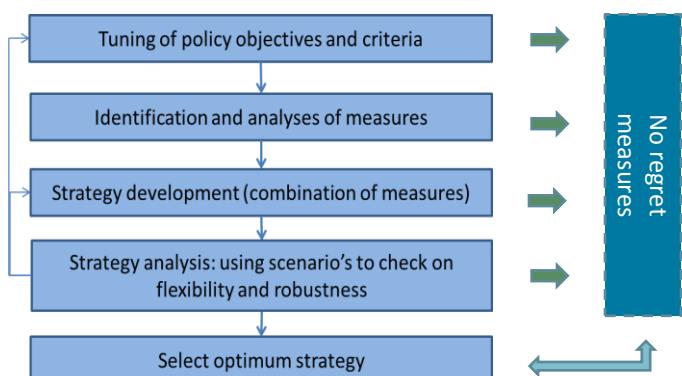


Dutch consortium

- ARCADIS: IWRM, Geo-Hydrology, CBA, Actor involvement
- Deltares: Evaluation of structural measures
- Daphnia: Ecosystem analysis
- DLG: Spatial planning
- Water board the Dommel: water governance



Decision making process



ARCADIS



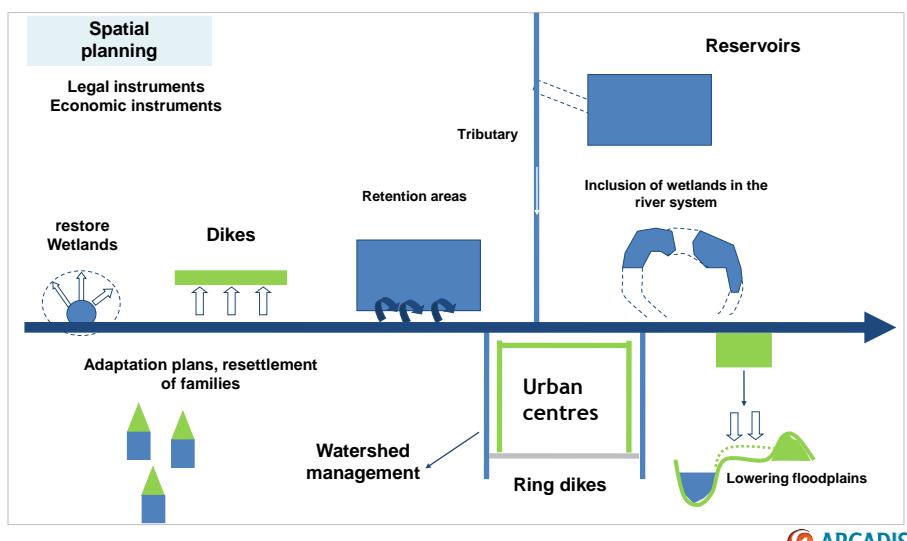
Objective Flood Risk Management Plan:



- Restore the natural flexibility of the valley and reduce the risk of flooding
- Return period 1:500 for Cali, 1:100 for urban centres and 1: 30 for agricultural areas
- Restore the river ecosystem
- Restore the ecosystem connection between the river and the mountain ranges
- Balance between benefits and costs
- A long lasting institutional organization

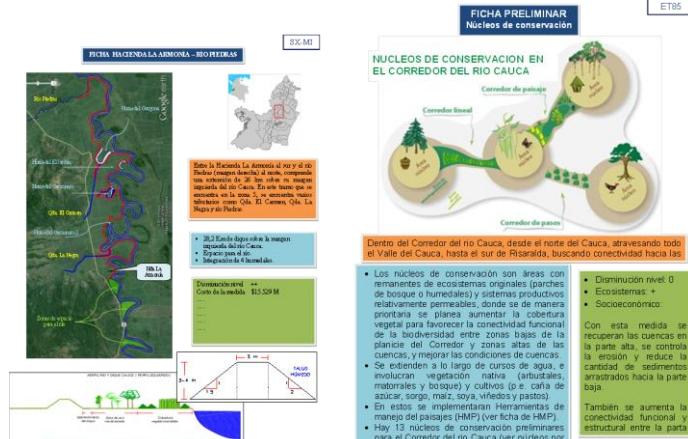


Type of potential measures for the río Cauca

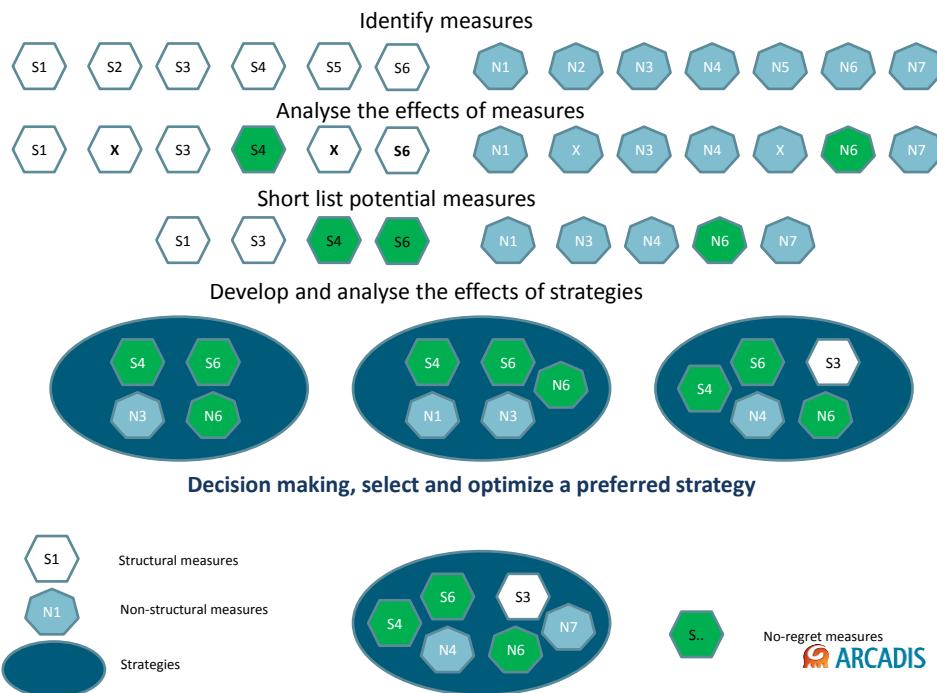




"Factsheets of more than 200 measures"



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Water governance



Governance
cooperation with
stakeholders

Content layer

Knowledge, experience, skills

Institutional layer

Organization, legislation, finance

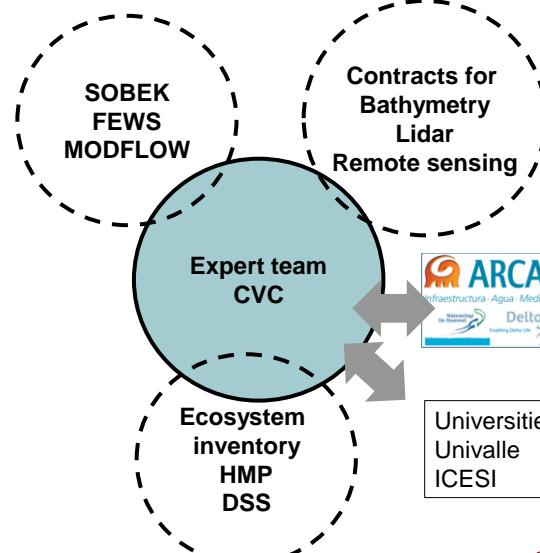
Relational layer

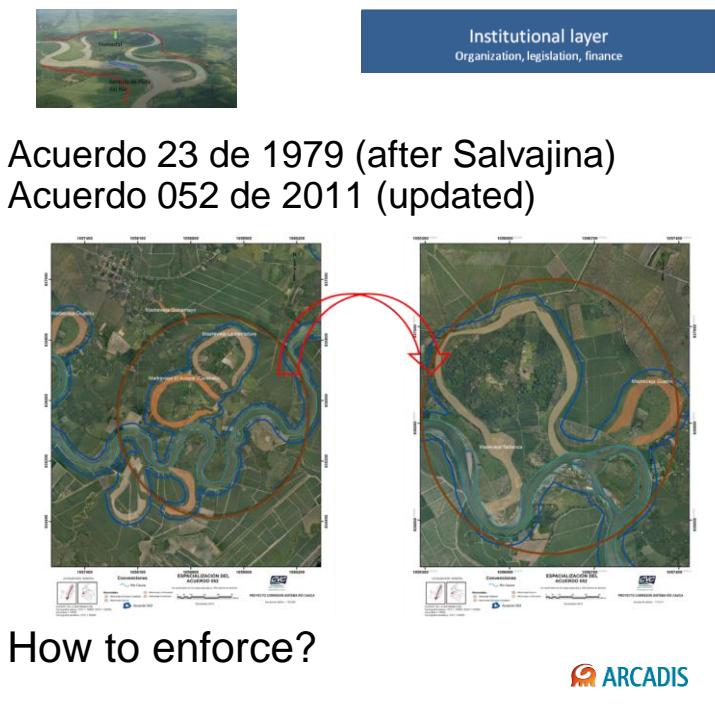
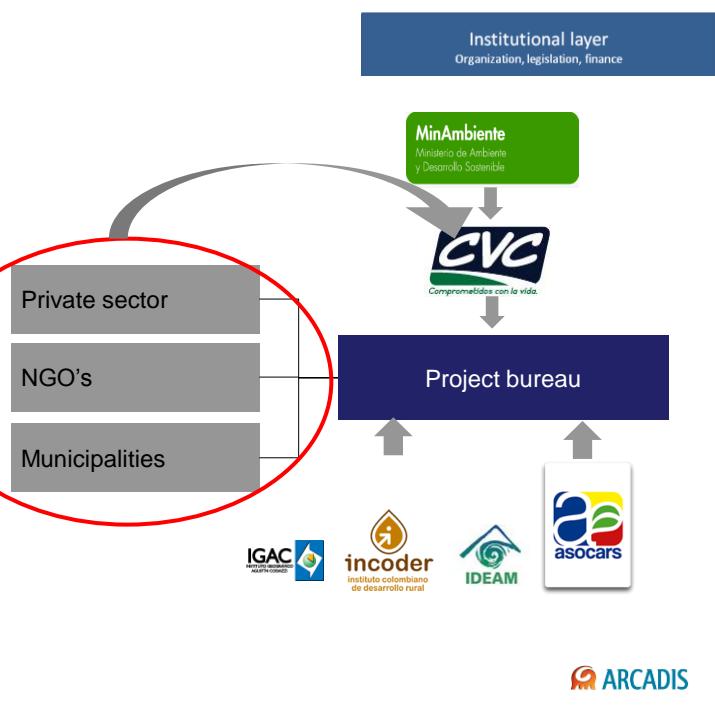
Culture, ethnics, communication, cooperation, participation

(Source: WGC)



Content layer
Knowledge, experience, skills



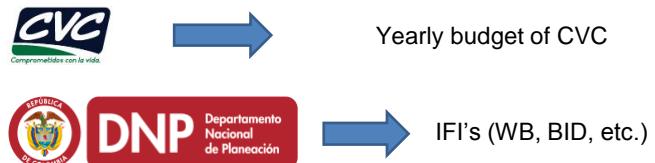


Acuerdo 23 de 1979 (after Salvajina)
Acuerdo 052 de 2011 (updated)



How to enforce?

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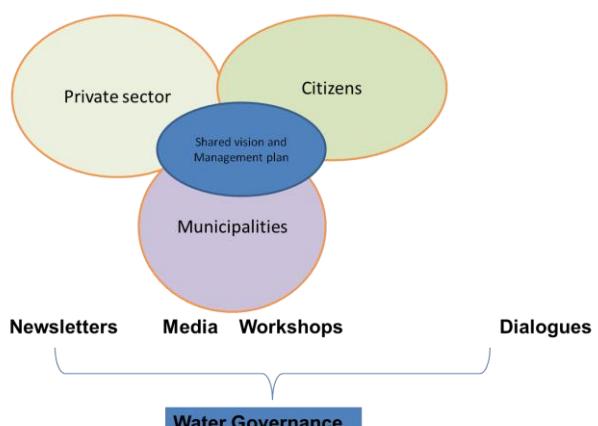


Municipalities and landowners

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How to bring together the different objectives and views



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Relational layer
Culture, ethnics, communication, cooperation, participation



Cooperation with
stakeholders

Decision making
Partnership
Participation
Consultation
Information



Clear communication on
level of participation
during the process



Imagine the result

Thank you for your attention



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