

...or ITALIAN style?

“L’acqua disfa li monti e riempie le valli.

E vorrebbe la terra in perfetta sfericità s’ella potesse”

(Leonardo da Vinci)

(water dismantles mountains and fills valleys and wished the Earth to be perfectly spherical, if she could)

Hydraulics

summary

!!!

PUT

NOT SOLVED !!!



**River Restoration:
a way out**

•

•

po

• Increase

AGILITY



SDF project Sustainable Development of Floodplains



This project has received
European Regional
Development Funding
through the INTERREG III B
Community Initiative

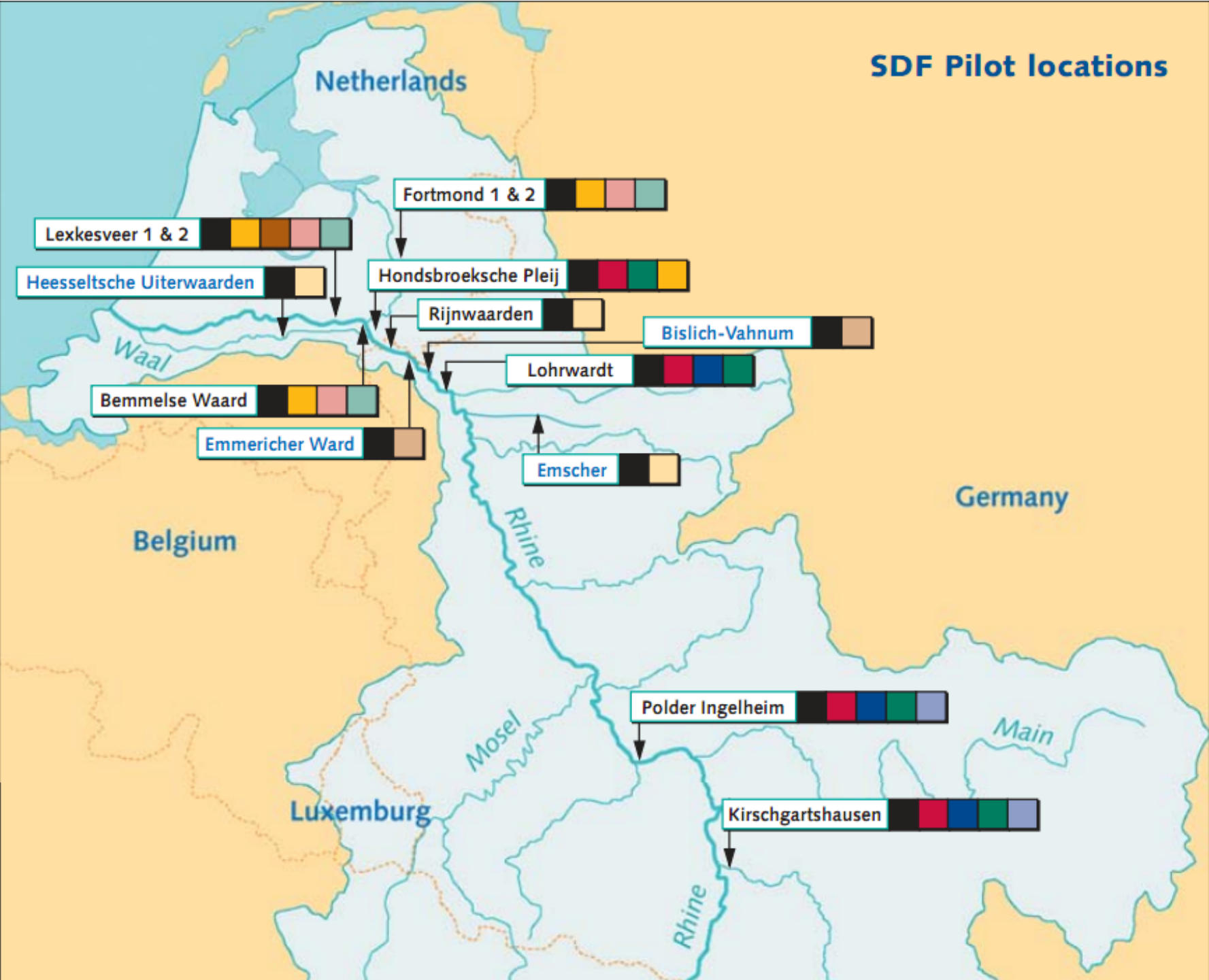


2003 - 2008

www.sdfproject.nl



SDF Pilot locations



River RHINE

creation of retention polders; ii) side channels; iii) lowering of floodplains; iv) dyke relocations; v) ecological flooding.

more than 26 million m³ of retention area was created, almost 6000 km of dyke was relocated, and 3 new side channels were created.



PRESENT



FUTURE

GRONDA LAGUNARE di Venezia



GRONDA LAGUNARE di Venezia

Banchine allagabili

Luglio 2003



Luglio 2008



LEGUER in France

Removal of Kernansquillec dam



LEGUER in France



Urban R RESTORATION: increase assets value (... e.g. even just money ...)



RIVER RESTORATION

leisure, recreation
(...river in TOWN! ...)



before



after

river ISAR
Munich (Bavaria)

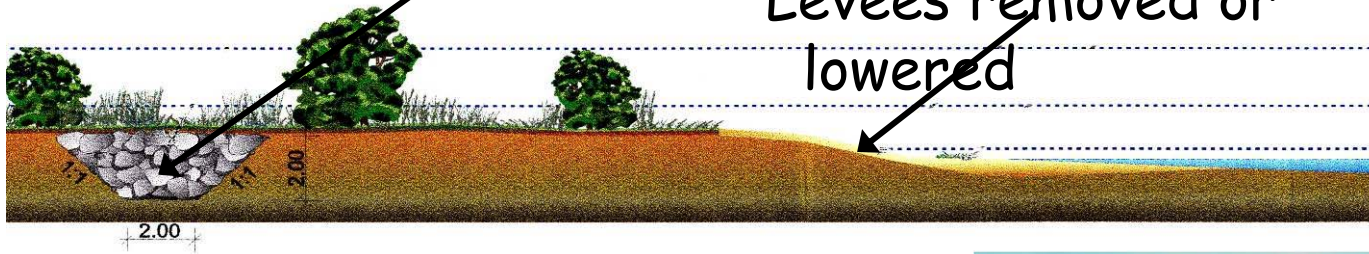


RIVER RESTORATION

leisure, recreation
(... a river in TOWN! ...)

River banks protections „sleeping“ under new lowered levees

Levees removed or lowered



river ISAR
Munich (Bavaria)



ACTIONS for RR

*NON
STRUCTURAL*

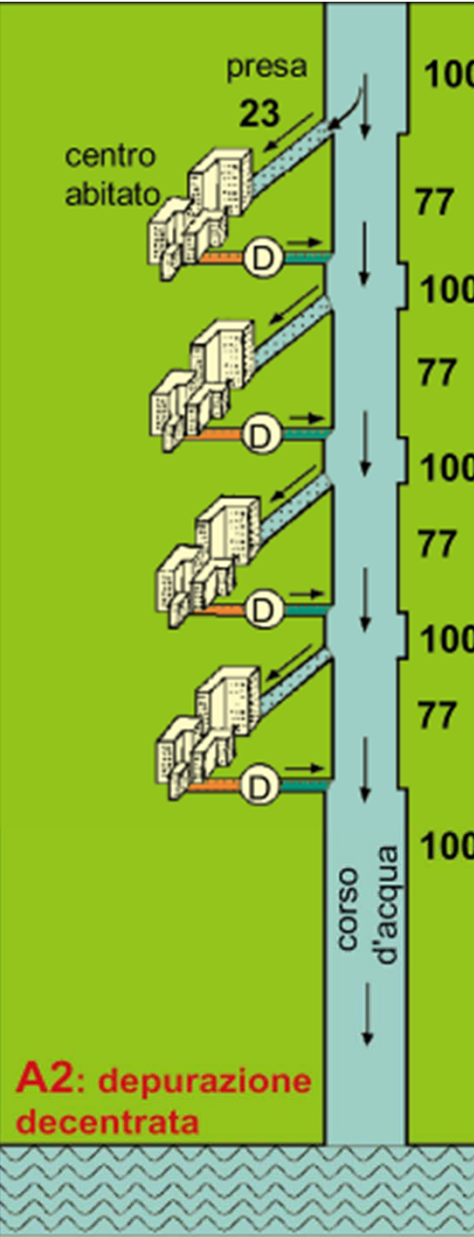
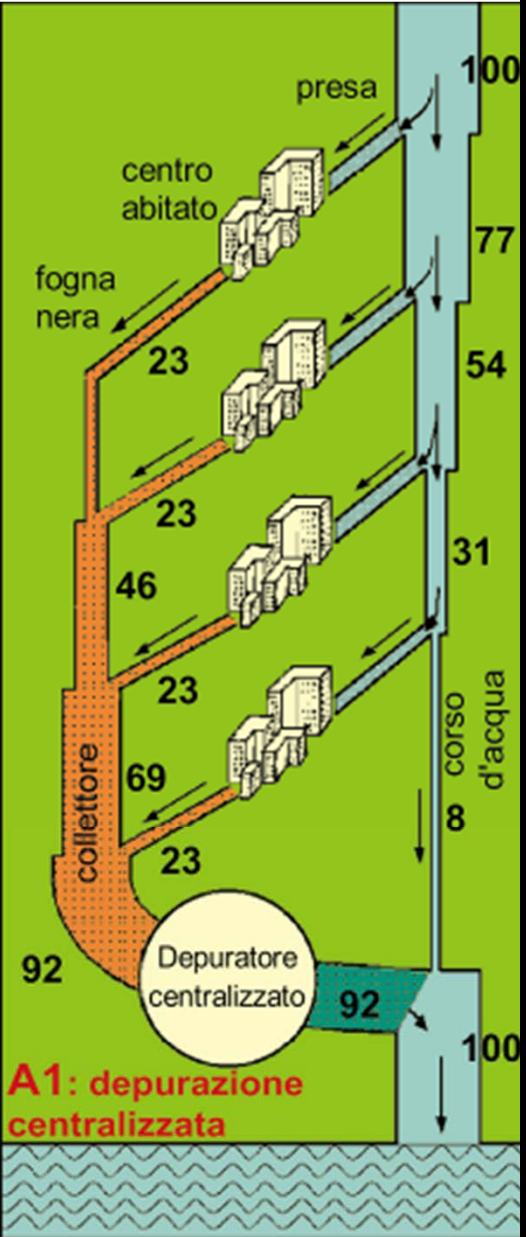
STRUCTURAL

- Culture (knowledge, sensitivity, awareness, values, know-how)
- Planning and decision making
- Normative-Regulations
- Incentives/Disincentives
- Information/monitoring



WW TREATMENT: eliminating the river?

CENTRALIZED



DE-CENTRALIZED

RESTORATION.... GROUND FOR

CONFLICTS

HYDROPOWER and Water SUPPLY

[India's Greatest Planned Environmental Disaster: The Narmada ...](#)

[www.umich.edu/~cnra492/Jenes/narmada.html - Traducir esta página](#)

"The State (India) wants to build these dams on the Narmada River in the name of National Development. But "How can you measure progress if you don't know ...

...d the

[Sustainable Dam Development in India](#)
[www.isn.ethz.ch/isn/Digital.../Detail/?... - Traducir esta página](#)

This paper explores reforms in environmental and resettlement policies in influence of domestic and external actors on the reform process.

[India: Dams & Development - The Final Report of the World ...](#)

[www.talsperrenkomitee.de/...dams/india_dams_d... - Traducir esta página](#)
Navalawala, B.N./ Gopalakrishnan, M.: Symposium.

More DAMS

[Tehri Dam - Wikipedia, the free encyclopedia](#)
[en.wikipedia.org/wiki/Tehri_Dam - Traducir esta página](#)

It is the primary dam of the Tehri Hydro Development Corporation Ltd. and the ... India was forced to take control of the project and at first it was placed under the ...

[DEVELOPMENT-INDIA: Poor Pay Social Costs of Big Dams Without ...](#)
[www.ips.org/socialforum/0122/devindia.htm - Traducir esta página](#)

30 Jan 2001 - DEVELOPMENT-INDIA: Poor Pay Social Costs of Big Dams Without Gain, says Global Report. By Meena Menon. MUMBAI, India, Oct 12 (IPS)- ...

RESTORATION.... GROUND FOR

CONFLICTS

ECOLOGICAL GOOD

STATUS



Give back to the river its own
space



HOW TO IMPLEMENT RIVER RESTORATION?

STOP to “paper PLANS”, **START** “real action”

→ need to **IMPROVE** decision processes by:

RATIONALIZATION + PARTICIPATION

while.. addressing conflicts



PUBLIC

- fears
- perceptions
- values
- ideas
- knowledge
- expectations

KNOW-HOW

- approaches
- methods
- tools

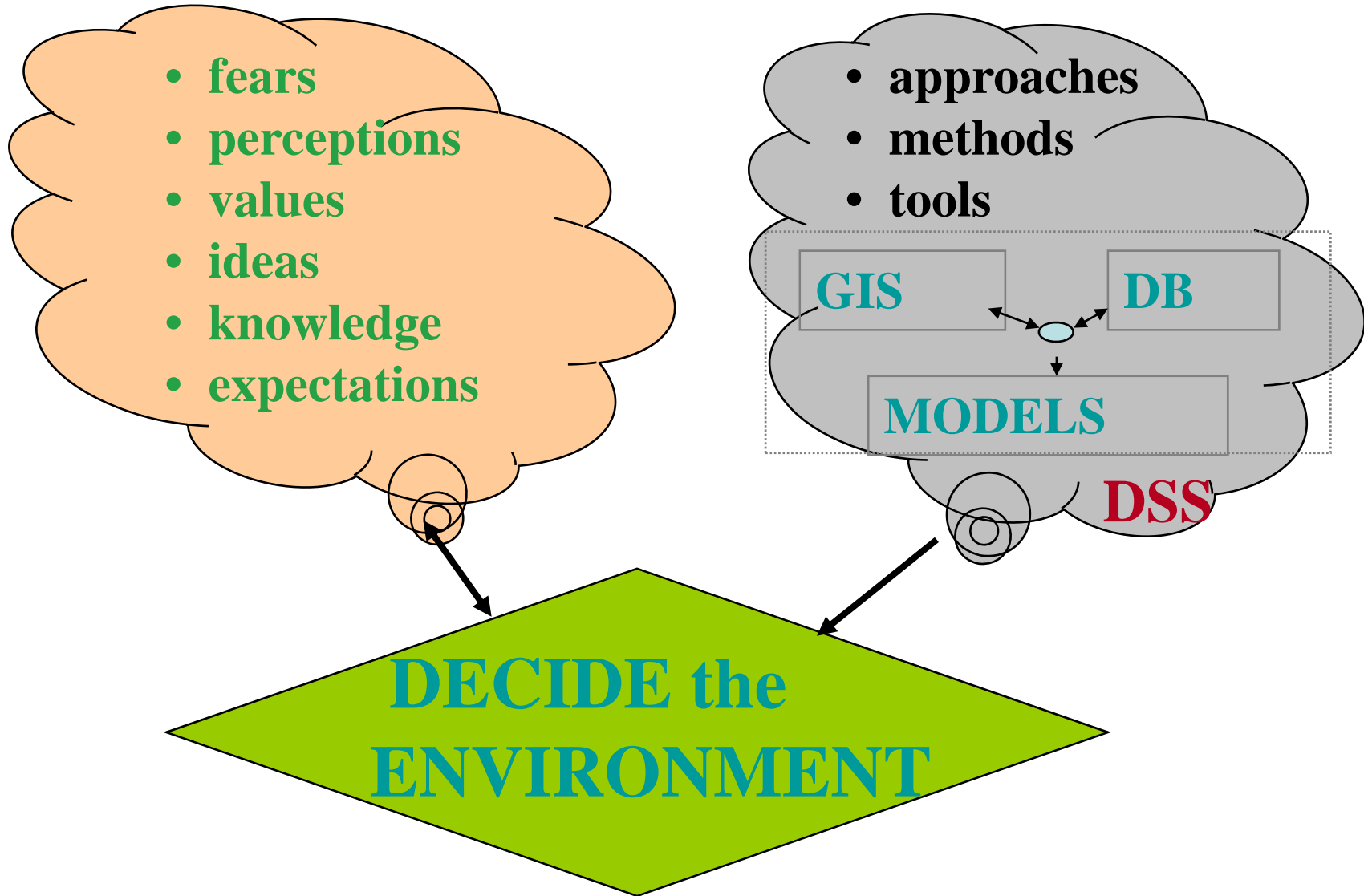
GIS

DB

MODELS

DSS

DECIDE the ENVIRONMENT



TRENDS

2005



Der Mareiter Bach bei Stange im Jahr 2005

tuture

e.g....Mithi

river in

www.indiawaterportal.org/node/18027

Mumbai



India: Mula- Mutha river

Rejuvenating the Mutha

The Pune Municipal Corporation's (PMC) 'Restoration of Mula-Mutha Rivers' project, planned in 2008 under the [Jawaharlal Nehru National Urban Renewal Mission \(JNNURM\)](#) is progressing at a snail's pace. The project was not to merely restore and beautify the Mutha, but also develop it as water transport system to reduce pollution and congestion on the city's roads.

India:

Pachnada

river

Yamuna, the largest tributary of the Ganga river, is all set to get an "eco health" revamp in the region, courtesy UK-based Thames River Restoration Trust (TRRT) and a number of local organizations working in the field of eco-restoration of waterbodies. WWF India has also been working to help restore the lower Yamuna to benefit the people and wildlife as part of the "Thames and Ganges Twinning Partnership". Elaborating on the activities, Sita Ram Taigor, said: "The actions include training local people in basic river and catchment monitoring techniques, environmental education of school children and providing sustainable energy use techniques at the local level."

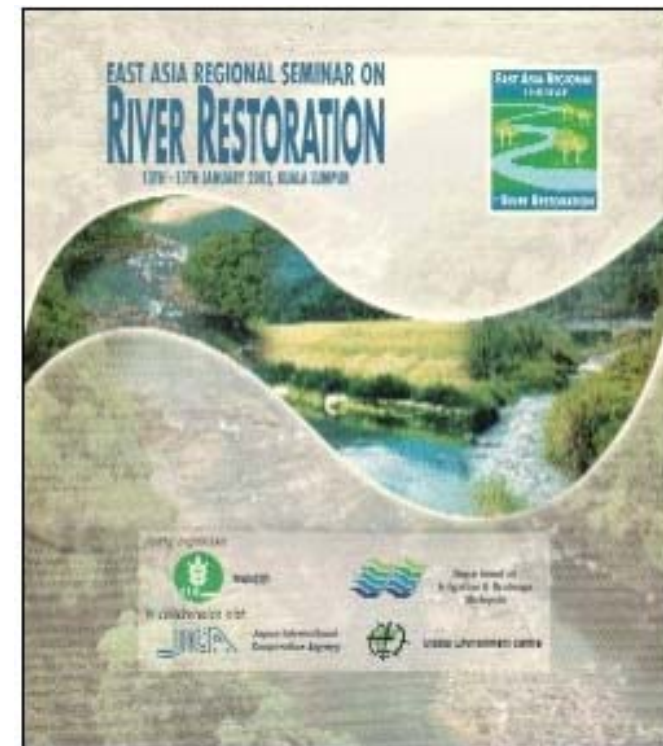
KANPUR: Yamuna, the largest tributary of the Ganga river, is all set to get an "eco health" revamp in the region, courtesy UK-based Thames River Restoration Trust (TRRT) and a number of local organizations working in the field of eco-restoration of waterbodies.

Spearheading the idea is a Delhi-based organization, the Peace Institute Charitable Trust (PICT), that has launched an extensive restoration programme at Pachnada, the confluence of five rivers -- Yamuna, Chambal, Kunwari, Pahuj and Sindh -- in Bhareh town of Etawah to develop community river restoration techniques with support from local groups, especially the 'Nadi Mitra Mandali' (Friends of the River).

activities already

Event Title:	East Asia Regional Seminar on River Restoration 13-Jan-2003 to 15-Jan-2003 <i>Past Event</i>
Venue:	The Legend Hotel, Kuala Lumpur, Malaysia
Organizer:	MANCID and Department of Irrigation & Drainage Malaysia in collaboration with Japan International Cooperation Agency and Global Environment Centre

Gopal, B. and Chauhan, Malavika. 2004. River restoration in India- a conceptual framework. Pages 105-109, In: Parish, F., Mokhtar, M., Abdulla, A.R., and Oi May, C. (Editors) River Restoration in East Asia. Proceedings of the East Asia Regional Seminar on River Restoration. Global Environment Center, and Department of Irrigation and Drainage, Kuala Lumpur.



Gange and Yamuna

WWF-India, The Peace Institute Charitable Trust and the Thames Rivers Restoration Trust launch the Thames and Ganges Twinning Programme

New Delhi: WWF-India, The Peace Institute Charitable Trust and the Thames Rivers Restoration Trust today celebrated the launch of a joint programme that aims to develop new techniques for the restoration of rivers, their wildlife and sustainable livelihoods for people. The Project personnel working on the Ganges and Yamuna Rivers in India and the Thames River in the UK came together and discussed their work and the ways in which they could learn from each other to benefit rivers around the world.

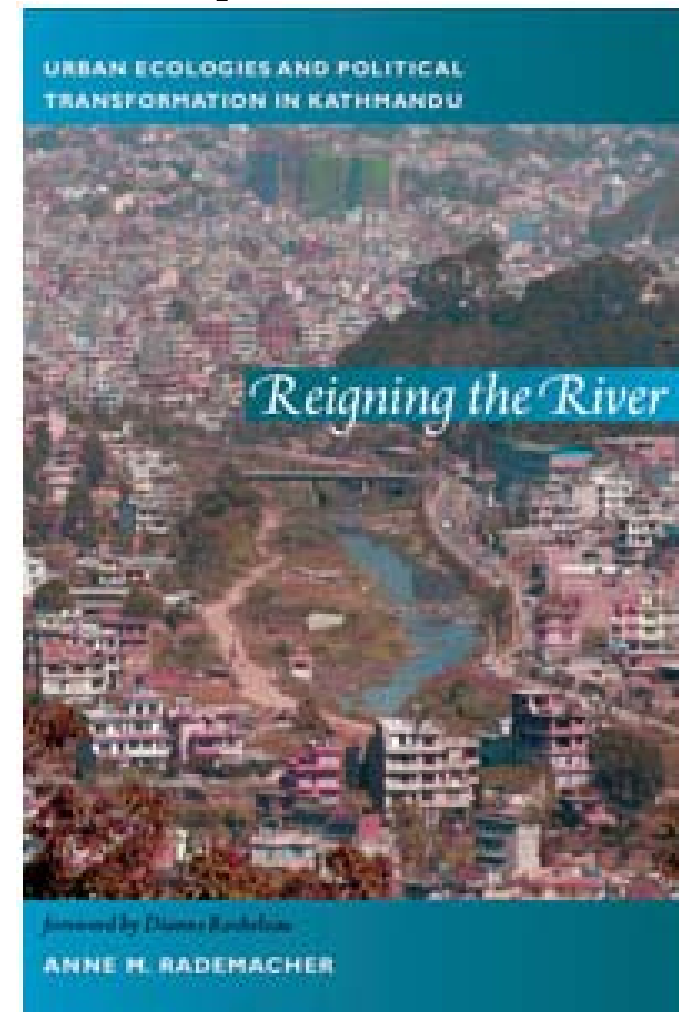
NR III IIIIIA. ...or neverending...

Bagmati, Nepal, River Pollution, South Asia, India

*Despite decades of restoration efforts by a rich ensemble of state-development actors, cultural heritage votaries and rights activists, the Bagmati is nothing less than a sewage canal by the time it meets its tributaries in Kathmandu. In her book *Reigning the River: Urban Ecologies and Political Transformation in Kathmandu* **Anne Rademacher**, assistant professor of social and cultural analysis at New York University, chronicles how the river's degradation resonates with the perceived social, cultural, religious and political disorder in the tumultuous democracy. She shares her insights with **Aditya Batra***

The three sets of actors agree that the river is hopelessly degraded. But each group defines river degradation and restoration in a different way. Even inside those camps, the stories are constantly changing. So

There is no specific policy prescription. I did look at different policy initiatives over time. Considered in isolation, they seemed like great roadmaps for river restoration. I wonder why they did not work, and come back to the problem of political stability. But political volatility characterises reality; it characterises the present and future. This is true for all environmental issues—climate change is the classic example.





EUROPEAN CENTRE FOR RIVER RESTORATION

www.ecrr.org



• www.restorerivers.eu



Te Awa Tupua
(integrated ecosystem)

Maori language, New Zealand

has got now a JURIDICAL STATUS !



Italian Centre for River Restoration

River Restoration: basic concepts



Andrea Nardini

www.cirf.org
info@cirf.org; a.nardini@cirf.org