



Wastewater Planning User Group Autumn meeting
Blackpool, UK, 11-12 Nov 2004

CityNet - The European Project Cluster on Integrated Urban Water Management

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NTNU Dept. of Hydraulic and Environmental Engineering



SINTEF Water and Wastewater



What is CityNet ?

- A cluster of six ongoing R&D projects, financed by the European Commission, dealing with urban water issues.
- A basket full of "Accompanying Measures" to integrate the six projects.
- Collaboration that works.



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Why water in cities ?

No water – no life

- Water is the most important food item.
- Water services (drinking water supply, sanitation and public hygiene, flood protection) are essential for any civilisation.

We live in cities

- 80% of European population lives in urban areas.
- Economic importance of European cities even larger.
- Urbanisation continues, also in Europe.



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Why water in cities ?

Big money

- Urban water systems comprise **40% (!) of replacement value** of all municipal-owned infrastructure assets.
- European water sector is **1% of EU GDP** (Growth: 5%/yr)
- Available **funds are not sufficient**: Systems deteriorate faster than they are rehabilitated.
- 20% of EU-funded **infrastructure investments** are for urban water systems.
- **EU extension eastwards** will sharply increase investment needs in Europe.
- EU has committed itself in **Johannesburg** and **Kyoto** to significantly improve urban water and sanitation services in the developing world.



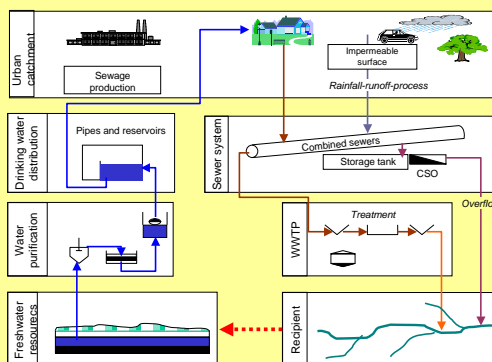
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Urban water system



The 6 CityNet projects (1/2)



AISUWRS - Assessing and Improving Sustainability of Urban Water Resources and Systems

Water/contaminant balance model and decision support for **urban groundwater** management.



CARE-W - Computer Aided REhabilitation of Water networks

Maintenance, repair and rehabilitation strategies for **water supply networks**.



DayWater - Stormwater **source control** and sustainable urban water management strategies
Provide context-dependent decision support.



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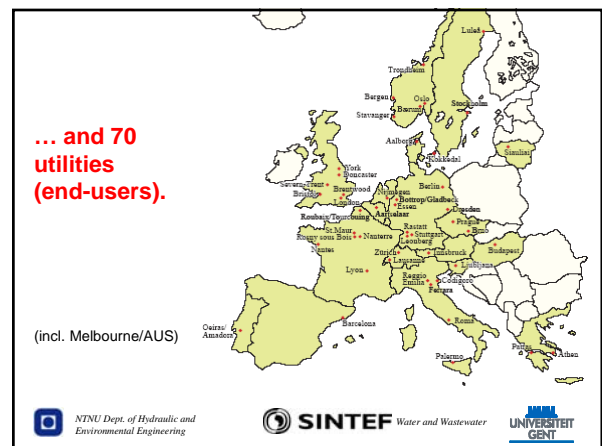
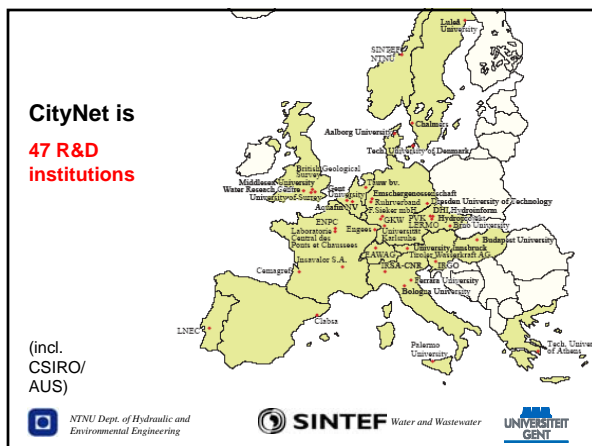
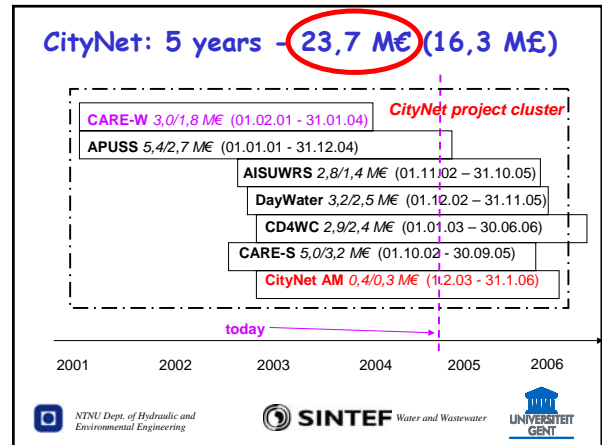
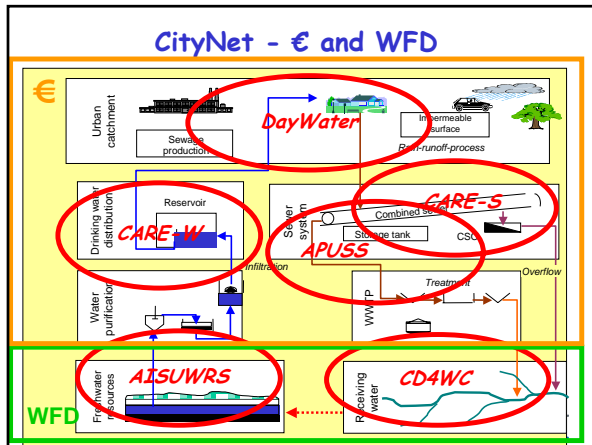
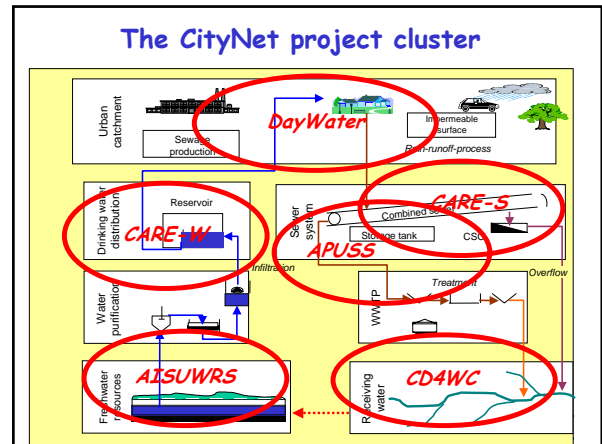
The 6 CityNet projects (2/2)

CARE-S - Computer Aided REhabilitation of Sewer and stormwater networks
 "Rehabilitate the right sewer at the right time using the right rehabilitation technique!"

APUSS - Assessing Infiltration and Exfiltration on the Performance of Urban Sewer Systems
 Quantification and modeling of infiltration and exfiltration in sewer systems.

CD4WC - Cost-effective development of wastewater systems for Water Framework Directive compliance
 Optimise sewer, treatment and receiving water systems with regard to ecological consequences.

Logos: NINU Dept. of Hydraulic and Environmental Engineering, SINTEF Water and Wastewater, UNIVERSITET GENT



CityNet Kick-off and follow-up

21-23 Feb 2003 (Fri-Sun) at ENPC Paris/F:

- 100+ scientists and end-users
- Presentations of the 6 CityNet + 10 related projects
- "R&D bazaar" (50 cross-collaboration contracts of which more than 50% are operational)
- Identification of research needs (synthesis paper and FP6 proposal : **Water for Billions**)

CityNet Cluster Activities

- ✓ Publicly accessible cluster web site
- ✓ Document exchange server/tool
- ✓ Cluster brochure and press releases
- ✓ Participation at EU policy meetings
- ✓ State-of-the-art and research needs seminar
- ✓ Integrated urban water research workshop
- ✓ Integrated urban water management seminar

- Joint dissemination and exploitation activities
- International CityNet conference
- Enhanced end-user participation
- Study modules

CityNet and ICT

Most CityNet projects deal heavily with ICT tools:

- Simulation models for water balance, flows, transport of matter, ecological effects, (development, application)
- GIS
- Data bases (process data, asset data)
- Decision support systems (technical, management)
- Integration of ICT tools

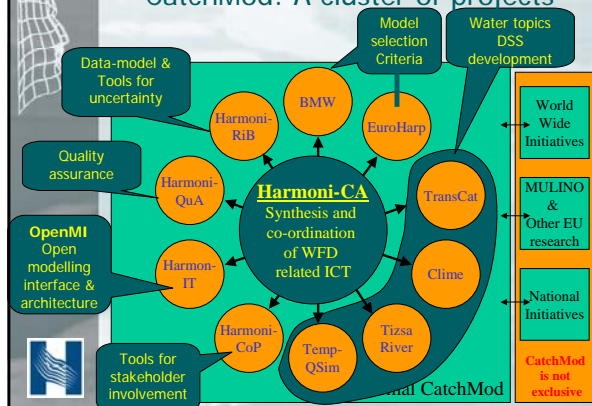
Harmoni-CA

Harmonised Modelling Tools for Integrated River Basin Management

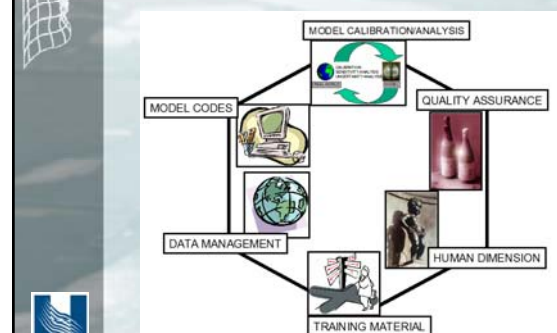
A Concerted Action "hovering" over the CatchMod cluster of projects



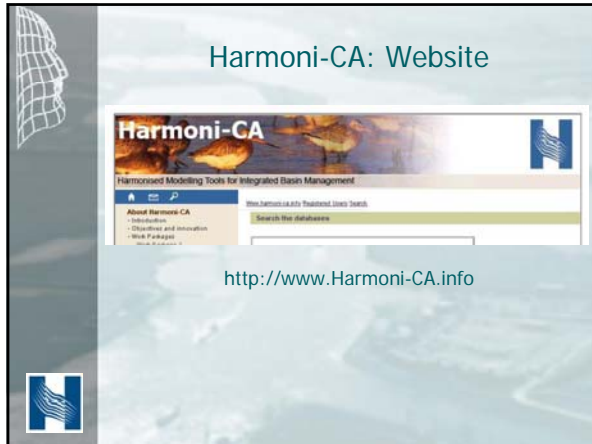
CatchMod: A cluster of projects



Harmoni-CA Modelling Toolbox



Harmoni-CA: Website



<http://www.Harmoni-CA.info>

CityNet: Website



<http://citynet.unife.it>

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