

Danube Regional Project

Project Component on Water and Wastewater Utilities

Future Use of Information, Analysis and Tools Developed

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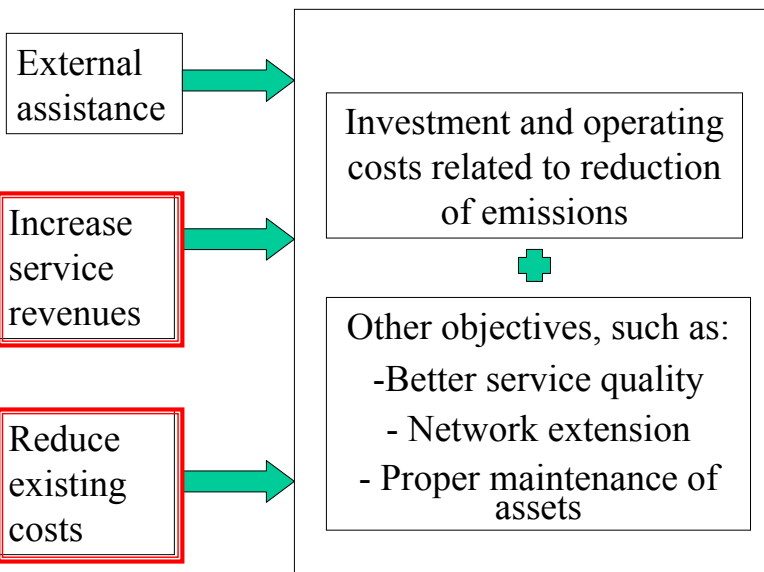
Effluent Discharge of Water and Wastewater Companies

- In many locations the most important source of transboundary pollution
- Pollution reduction driven by:
 - EU directives (UWWT, WFD)
 - Existing national regulation, including effluent charges - usually low effective incentive, though
 - Investment grants
 - Protest of downstream communities
- Still a very slow process. Why?

Barriers to Greater Effluent Control

- Very high cost of wastewater collection and treatment: Investment AND Operation
- Other, also expensive, competing goals related to e.g. service quality, maintenance of assets, network extension
- Limited local resources
- Limited access to low cost capital
- Limited prospects to change the status quo, e.g.
 - little incentive for management to take risk;
 - low tariffs to please voters

How to Facilitate Pollution Control?



A Set of Reform Proposals to Encourage Efficiency and Increase Revenues

- Better data collection and management
- New tariff designs and tariff levels (cost recovery, fixed tariff etc.)
- Cost saving investments
- Cost saving reorganization
- External performance audits
- Community relation programs
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ASTEC Model – Account Simulations for Tariffs and Effluent Charges

- Purpose: Automated calculation of the physical and financial consequences of changes in the operation of W&WW utilities
- Tool for structured analyses of operational changes, investment projects, and policy reform proposals
- Based on the spreadsheets of Excel, Solver, and Visual Basic
- “Freeware” (anyone can use it without paying for it), but needs a fair amount of learning before effective use

ASTECC User's Surface

CONTROL PANEL

Number of service user groups	15	Set number
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Copy scenario data	From scenario	To scenario	Copy
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Run scenario	9	Run
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Local currency	RON	Local	EUR	USD
Exchange rate (RON/EUR)	3,6			
Exchange rate (RON/USD)	3			

2.2 Water use and tariff

Invoiced water use per account (m ³ /year)	Fixed water tariff per account (HRK/year)	Variable water tariff (HRK/m ³)
92	60	2,75
111	60	2,75
37	60	2,75
111	60	2,75
18	60	2,75
525 680	2 000	8,63
86 083	300	8,63
1 550	300	8,63
22	60	8,63
569	60	8,63
26	60	8,63

5.3 Full cost recovery

Full cost recovery	Yes
Method for full cost recovery	C

Use of ASTEC in Pitesti, Romania



Use of ASTEC in Pitesti, Romania

Changes introduced (examples)

- Leakage reducing investments
- Network extension
- Individual metering of apartments
- Separated storm water collection
- Effluent surcharge on industrial wastewater
- Cost recovery requirement
- Outsourcing of repair and maintenance



... and their impact on

- Produced and consumed water volumes
- Collected and treated wastewater volumes
- Prices
- Financial accounts (costs, revenues)
- Customer bills

Use of ASTEC in Karlovac, Croatia



Use of ASTEC in Karlovac, Croatia

Changes introduced (examples)

- Introduction of a monthly water fee
- WWTP investment (primary vs. tertiary)
- Reduce the gap between household and commercial tariffs
- Exchange rate fluctuations - EBRD loan
- Change in government fees paid by ViK Karlovac
- Reduced workforce



... and their impact on

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Dissemination

- Workshops, seminars
- Basin-wide and country specific reports
- Two demonstration project reports
- Thematic papers
- ASTEC model; experience paper; user's guide
- Information sheets
 - Translated to 8 languages
 - Sent to management of over 600 utilities

Use of the ASTEC Model after DRP

Factors increasing the chance of use

- Proactive management
- Staff speaks English
- Experience with Excel and computer based tools
- Proper data management within the company
- Large investments under consideration

How to Advance Use of ASTEC to Support Introduction of Reforms?

- Translation of the model and the User's Guide
- Training workshops to water companies on
 - ASTEC use
 - data management
- Case by case assistance and training
- Further development of the model based on local needs
- Companies using ASTEC share their experience
- National interest groups, waterworks associations

Thank you

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