

# Financing in the field of communal water supply and sewage disposal services in Austria

Austria's water utilities are financed to ensure cost recovery. **STEFAN HEIDLER** and **CHRISTOPH PRANDSTETTEN** explain the detail of how this is achieved.

**Austria's environmental support scheme for water management ensures and aids the efficient implementation of measures to ensure proper wastewater disposal, including industrial wastewaters, as well as guaranteeing a sufficient local water supply.**

Past efforts have already led to immense improvements in the quality of waters in our lakes and rivers. Nevertheless, it is essential to take further appropriate measures to dispose of municipal and industrial wastewaters properly and to provide a sufficient supply of top-quality drinking water.

Between 1959 and 1993 a federal support scheme provided low-interest loans from a water management fund for these purposes. This scheme was focused on water supply and wastewater disposal in cities and other urban areas.

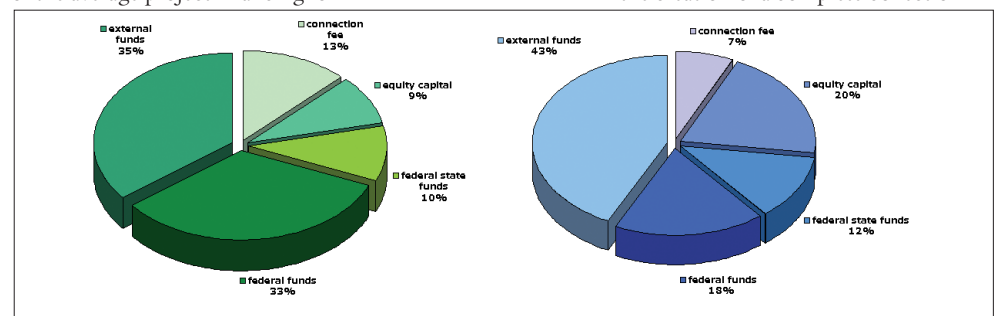
In 1993 the scheme was restructured to ensure an increased focus on developing wastewater disposal systems in rural areas. The support is provided in the form of subsidies on annuities or capital investment grants, and in 2001 the annuity subsidies were changed into financing subsidies.

Since 1959 around €40 billion (\$50.6 billion) has been invested in community water services, around €31 billion (\$39.2 billion) of the total amount being for wastewater treatment systems. From 1993 to 2006 around €4 billion (\$5.06 billion) was spent on water supplies and €12 billion (\$15.2 billion) on wastewater disposal to meet legal obligations.

Most of the investments – around 99% – have gone into public utility water and wastewater projects, with just

1% assigned to private services, mostly operated by cooperatives.

Between 1993 and 2006 around €413 million (\$523.2 million) was spent on subsidies for water supply services, and €3.96 million (\$5.02 million) was spent on wastewater disposal. Over this period, the sources of the average project financing for

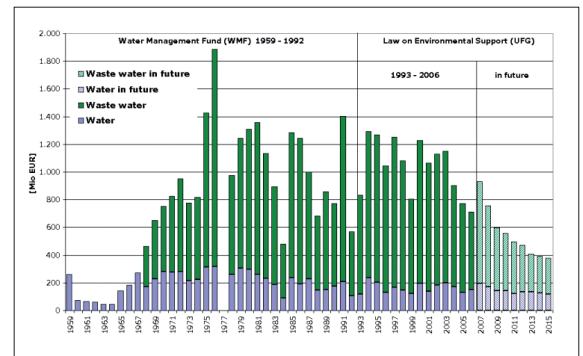


communal wastewater disposal projects is divided as 33% federal subsidy, 10% federal state subsidy, 35% external funds, 9% equity capital and 13% from connection fees.

For water supply projects the division is 18% federal subsidy, 12% federal state subsidy, 43% external funds, 20% equity capital and 7% connection fees.

### Future investments in water management measures

An investment of around €5 billion (\$6.3 billion) has been identified for water supply and wastewater disposal measures to 2015. Around €1.3 billion (\$1.65 billion) of this will be for water supply projects and €3.7 billion (\$4.69 billion) for wastewater disposal projects. Over this period it is predicted that some 62% of the total investment will be for sewer construction and rehabilitation, and 12% for construc-



**Figure 1: Annual distribution of investment costs for water services**

tion, adaptation or rehabilitation of wastewater treatment plants. The remaining 26% of the investment is required for water supply measures.

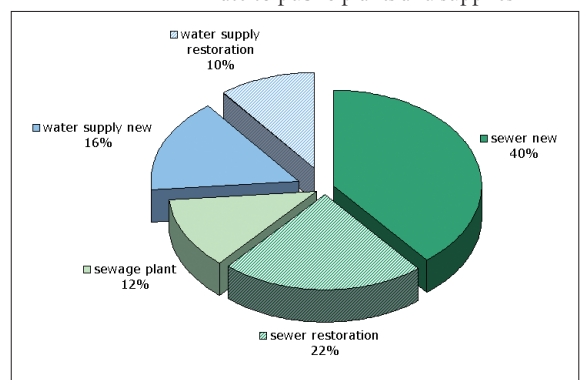
### Asset inventory of water management facilities

A database installed in 1993 enabled the creation of a complete collection

of the established asset inventory of water management facilities. All of the plants constructed before this time can only be valued roughly in line with well-known costs.

Between 1993 and 2006 over 42,000km of sewers and some 10,000km of water pipelines were constructed. The present connection rate to public plants and supplies

**Figure 3: Distribution of future investments for water management**



will be increased by the proposed investments to around 91%. Most of the capital outlay is for sewer and water pipeline construction, with just 20% of investment on the wastewater disposal side for constructing treatment works.

**Fee analysis**

The federal regulatory framework for setting rates and charges in Austria is based on two main national laws, the Finanzverfassungsgesetz (F-VG) and the Finanzausgleichsgesetz (FAG). The former authorises municipalities to levy charges, for which federal and regional legislators specify the maximum amount. The latter regulates the scope of municipality action on fees. Municipalities are authorised to cover the investment and operational costs for all their facilities operated for public administration purposes by the collection of charges.

In accordance with the FAG, the total annual charge may not exceed the double annual requirement for maintaining and operating the facilities, interest charges and repayment of the operation's costs.

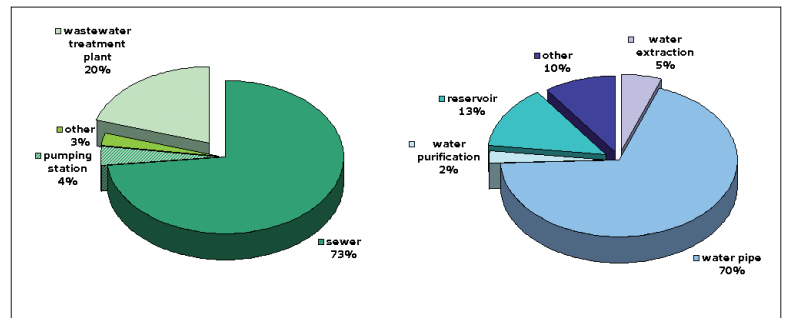
Municipalities can use the collection of fees as an environmental instrument, particularly for communal water supply and wastewater disposal facilities (the polluter-pays principle). Fee collection as an environmental instrument is limited to the principle of equivalence, and total fees are bound by the principle of cost recovery. In addition, municipalities are bound by further principles: thrift, economy and appropriateness.

In water management, fees are divided between one-off charges such as connection fees and current or operational fees such as water and wastewater tariffs. The scale used for assessing fees is determined by local or regional government regulations. The scale is based on, for instance, annual requirements, water consumption or wastewater disposed of, property size and so on.

**Analysis of charges**

In Austria there is no unitary system for water and wastewater fees because

**Figure 4: Distribution of investment costs for established asset inventory of water management facilities**



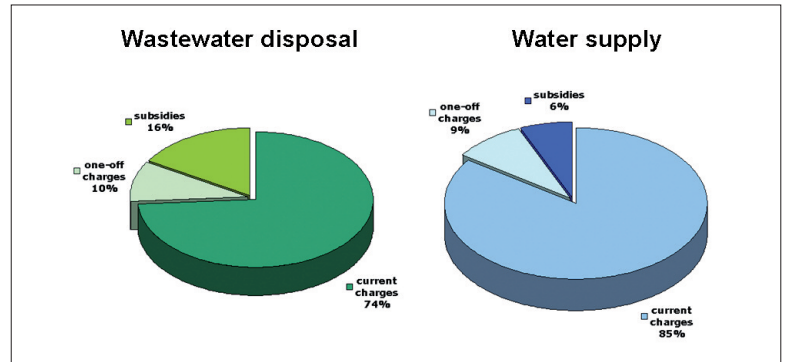
of the federal structure and the municipalities' sovereignty in fee charging. Tariffs therefore vary both from state to state and within one federal state, from municipality to municipality. The municipalities specify the size and basis for assessing connection fees and operational fees, minimum or basic charges and the exemption clauses in their

pollutants, on top of the current fees. Wastewater and stormwater are calculated differently and connection fees may be raised for discharge of both storm and wastewaters.

**Analysis of current levels of cost recovery**

Cost recovery results from the quotient of the annual operational and capital

**Figure 5: Structure of rates and charges in the Austrian water management**



charging regulations.

The only thing that the fee systems have in common is that they all contain one-off and current fees. One-off fees are unique amounts paid for connection to the infrastructure. The sum involved depends mainly on an 'area for calculation' which is usually based on the amount of developed and undeveloped area, but there are also common flat rates or minimum charges. Current fees are regular payments for water service provision and relate either directly or indirectly to water consumption or the amount of wastewater discharged.

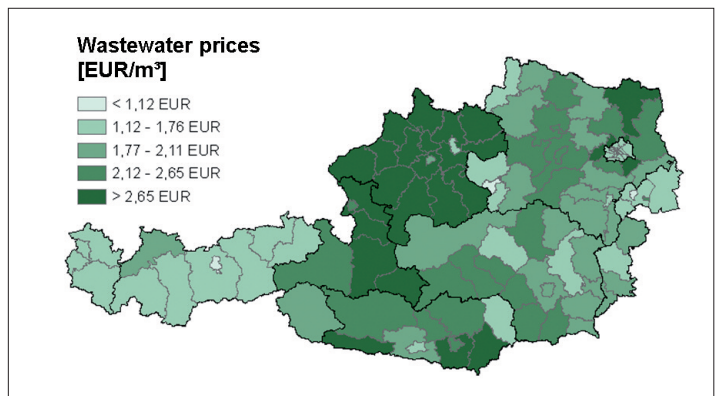
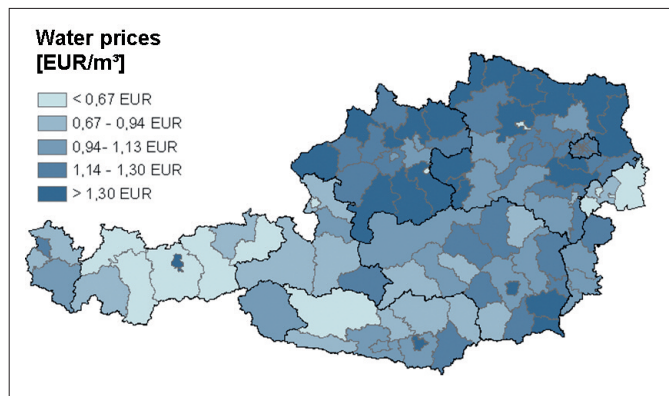
In some areas, there is a heavy polluter surcharge for wastewater discharges with high loadings of

costs and the fee revenues. Annual revenues are mostly obtained from fees and charges, with the communal fees constituting the largest element of the charges. Therefore comparing average water and wastewater prices is the best way of representing water services revenues.

The average price of water in Austria is about €1.5/m<sup>3</sup> (\$1.89/m<sup>3</sup>), and the price for wastewater is around €2/m<sup>3</sup> (\$2.53/m<sup>3</sup>).

Annual costs are the sum of capital, operational and external costs. The capital costs are the sum of cost-accounting depreciation and attributed interest. Operational costs consist of personnel costs, energy and material costs, and the costs of disposing of

**Figure 6: Average water and wastewater prices in the Austrian districts**



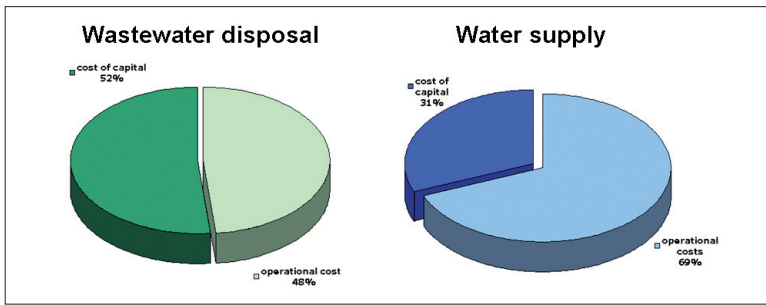
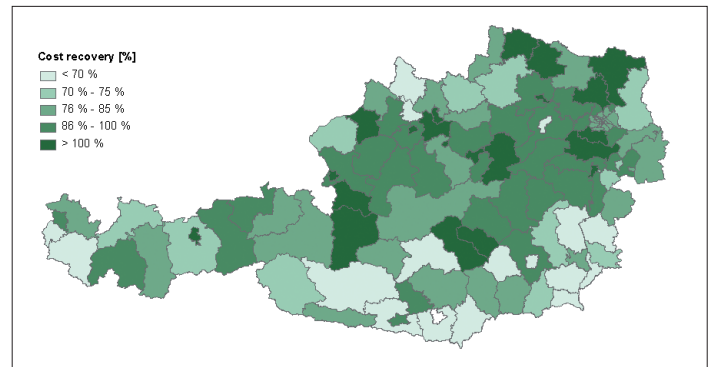
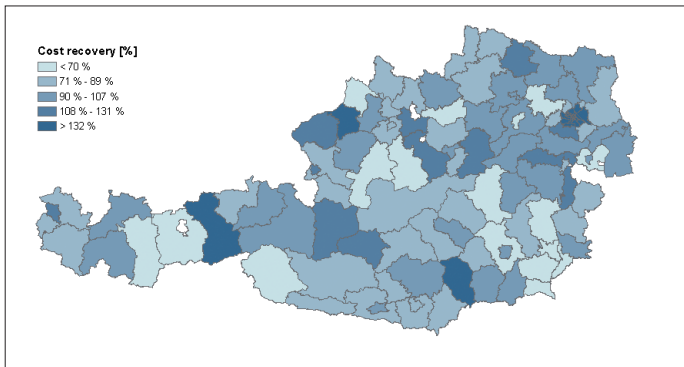


Figure 7: Structure of annual costs for water services

mental support scheme the required cost-recovery principle can generally be guaranteed.

**Prospects and development**

With the investments in water management that have been undertaken, most of Austria's population is already connected to a public water supply and wastewater treatment facilities. In future, outlying areas



Left - Figure 8: Average cost recovery for water supply services in the different districts of Austria  
Right - Figure 9: Average cost recovery for wastewater disposal services in the different districts of Austria

will have to be connected to public systems. Apart from these remaining investments in new water supply and wastewater disposal facilities, reorganizations and changes to existing facilities will become even more important.

New instruments such as the digital cadastral register, a requirement for proper accounting of costs and activities to ensure efficient operation of water facilities and a need to conserve value will come to the fore. To set fees and charges for water management it is necessary to undertake a comprehensive overview of the technical and economic condition of the facilities concerned. Water supply and wastewater treatment facilities are mainly complex, with extensive networks, and should be operated like a private business although they are mostly in public ownership. ●

residuals. In wastewater disposal, capital costs predominate (52% of the annual costs) whereas water supply costs are dominated by operational costs (69% of annual costs).

**Cost recovery**

Cost recovery estimation depends on a number of restrictions and limitations:

- the database reflects the cost-income structure from a short period of time (2002 to 2005)
- the databases do not allow unambiguous estimation of cost-recovery for water services. The data come from municipalities' accounting systems, which partly consider income and expenditures or costs and revenues. The former type does not take into account returns on

equity capital and write-offs. Bearing in mind these limitations, cost-recovery is calculated as a ratio of municipalities' annual income and costs. Cost-recovery for communal water services is around 83% for wastewater disposal and 84% for water supply services (without considering data from Vienna).

One main objective of the support scheme is to guarantee affordable charges for users. Therefore the amount of aid depends on the total costs of investment for wastewater disposal. If the investment over a 25-year period is less than €5.5 (\$6.96) per household, a subsidy of 8% is provided. Above €5.5, the subsidy rises to 50% of the investment costs exceed €15 (\$18.98) per household. With the aid of the environ-

**Kommunkredit Public Consulting – analysing investment spending in the Austrian water sector**

Kommunkredit Public Consulting (KPC) acts as a partner for public sector clients in Austria and many other countries around the world offering consultancy services for state and local authorities, publicly owned enterprises and international institutions.

KPC supports its clients in identifying and implementing projects, programmes and public support instruments in the infrastructure sector and specialises in offering economic and financial consultancy services during the pre-investment stage of projects. KPC's most important services include:

- needs assessment and project identification
- preparation and review of feasibility studies, project contracts and financing schemes
- appraisal of infrastructure investment projects
- advice on preparation and implementation of PPP-projects
- project management support throughout the project cycle

In Austria, KPC is responsible for the management and implementation of the state environmental grant scheme on behalf of the Federal Ministry for Agriculture, Forestry, Environment and Water Management. Kommunkredit manages the entire programme including receipt of grant applications, appraisal of project proposals (technical, economic and financial appraisal), concluding grant contracts and fiduciary management (disbursement of the grant funds).

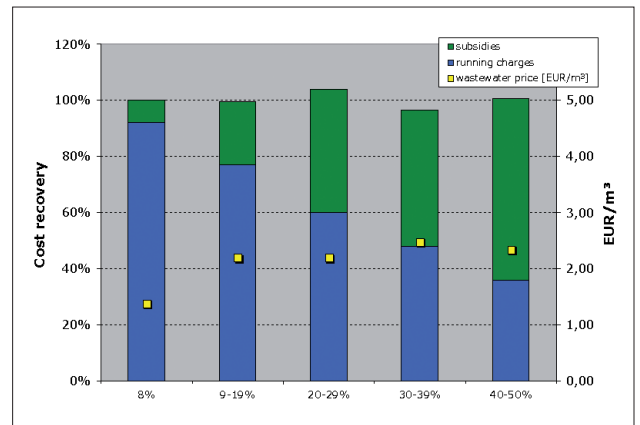


Figure 10: Effect of support schemes to the cost recovery dependent on aid intensity of municipalities

**About the authors:**

Stefan Heidler and Christoph Prandstetten, Kommunkredit Public Consulting GmbH, Vienna, Austria.