

## THE PRICE OF WATER: TRENDS IN OECD COUNTRIES

### EXECUTIVE SUMMARY

*Water problems are expected to be a major constraint on sustainable development in some countries in the 21<sup>st</sup> century. Water pricing is a key tool for overcoming this constraint.*

There is widespread international concern that poor water management will be one of the major limiting factors on sustainability in the new millennium. Water shortages, degrading water quality and the lack of competitiveness of water-intensive economic production are all pushing water management issues higher on the international agenda. Getting the price for water "right" is increasingly seen as an important tool for overcoming these problems, and for channelling the management of this key natural resource in a more sustainable direction.

*The Price of Water: Trends in OECD Countries provides the latest country-specific information about water pricing practices in OECD countries.*

*The Price of Water: Trends in OECD Countries* provides the latest country-specific information on water pricing practices and trends in OECD countries. It focuses especially on the important water-using sectors of agriculture, industry, and households. It also addresses several "non-sectoral" pricing topics, such as water subsidies, institutional change, and affordability.

*OECD countries have made considerable progress in the past decade toward improved water pricing practices, including:*

Although considerable variations continue to exist in both price structures and price levels, the report provides evidence of substantial progress over the past decade in most OECD countries toward the goal of more "rational" water pricing. Among the key trends explored in the book are:

*... increased management autonomy for water utilities...*

- increasing management autonomy for water utilities, reflecting a shift in the role of governments away from being the provider, and toward being the regulator of water services. While this trend is generally accompanied by an increased role for the private sector, most countries have not yet opted for the full privatisation approach, preferring to involve the private sector in the provision of water services mainly on a concessionary basis.

*...more emphasis on "full cost recovery", including reduced (or at least more transparent subsidies)...*

- increasing acceptance of the need for "full cost recovery" in the provision of water services. This is accompanied by significant reductions in both total subsidies and cross-subsidies between different user groups. Even where subsidies still exist, there is now more emphasis on the need to make these subsidies transparent.

*...wider use of marginal cost principles in pricing structures...*

- increasing awareness that subsidising water use is not necessarily the best way to achieve sectoral economic or social goals, and that some economic and social goals are actually harmed in the longer-term by using a subsidy-based approach.
- further evidence that households, businesses, and agricultural producers *do* change their water consumption patterns in response to such variables as price levels, metering penetration, and seasonal pricing.
- continuing increases in the penetration of *household* water metering. Nearly two-thirds of OECD countries already meter more than 90% of single-family houses, and a few are also expanding their metering of apartments (e.g. France and Germany). Industrial water use is already metered in most countries, while agricultural use is metered in only a few.

- movement in the household sector away from decreasing-block and flat-fee pricing structures and toward uniform volumetric or increasing-block tariff systems. Most countries also now use two-part tariffs (i.e. with fixed and volumetric components), with the volumetric portion making up at least 75% of the total water bill. For example, some eastern European countries (Hungary, Poland, Czech Republic) already use pricing systems based solely on volumetric pricing, with no fixed charge element at all. Even where fixed charges persist, there is evidence of a shift toward the reduction (or even abolition) of large minimum free allowances. For example, Australia and South Korea have both recently made significant strides in this direction.
  - a tendency for *industrial* water users that draw water from the public system (representing 23 per cent of the industrial freshwater used on average in OECD countries, with the rest being direct abstractions) to be charged according to the same structure as household users, but with a more frequent use of volumetric pricing.
  - a tendency for most *agricultural* tariff structures to be based on the surface area irrigated, and to be charged either as a flat rate or according to crop type. Water volume-based charging systems are the next most common, although a variety of other structures also exist.
  - household water supply and sewage disposal prices have generally increased, and significantly so in a few countries. Of the 19 countries for which enough data was available for this study, all but one exhibited real per annum increases in water supply prices during this period, and five actually experienced average rates of real price increase of 6% or more per annum (see Table below).
  - a continuation of relatively low agricultural water prices compared with household and industry prices, with a few countries continuing to apply no charges at all to irrigation water abstractions.
  - the common use of special tariff structures and/or rates for large industrial water users. Occasionally, these special arrangements may cover water quality variables as well as quantity ones.
  - an increasing tendency for industrial water consumers to go "off-system" (i.e. to directly abstract water supplies or to recycle and treat their own waste waters before directly discharging them) as these options become more financially viable in the face of increasing charges for publicly supplied water service.
  - an increasing tendency to charge for wastewater disposal on the basis of treatment costs actually faced by service providers. For this reason, water charges related to pollution have increased substantially in recent years. There is also a trend in the direction of separating treatment and supply charges on individual water bills.
  - the development of several innovative "social" tariff structures, many of which contribute to environmental and economic goals at the same time, in response to concerns about the affordability of household water services. One interesting experiment with tariff-based solutions to affordability problems comes from the Flanders region of Belgium. Since 1997, the first 15m<sup>3</sup> per annum *per person* in each household is provided free of charge. Since most other "free minima" are based on the *household* as a unit (i.e. regardless of the number of people), this innovation may offer a more equitable approach over the long-term.
- ...higher water price levels in the household and industrial sectors (but not generally in agriculture)...*
- ...more use of special charges for specific water supply and treatment services, and...*
- ... new experiments aimed at providing minimum quantities of water at affordable prices.*

Table Summary of Recent Changes in Household Water Price Levels (Selected OECD Countries)

Country	Years	Nominal (Aggregate) % Increase	Average Real (Annual) % Increase
US	1992-98	34	2.4
Australia	1995-96	0.7	-0.6
Japan	1995-98	2.5	0.3
Korea	1992-96	45	2.6
Belgium	1988-98	65	2.7
Denmark	1984-95	175	6.3
Finland	1982-98	234	3.8
France	1991-96	55	7.0
Germany	1992-97	36	3.8
Greece	1990-95	114	2.2
Hungary	1986-96	3923	18.7
Italy	1992-98	39	2.0
Czech Republic	1990-97	2591	n.a.
Luxembourg	1990-94	42	6.0
Netherlands	1990-98	73	4.6
Sweden	1991-98	35	1.9
England/Wales	1994-98	22	2.0
Scotland	1993-97	28	3.4

*Notes*

- This table summarises changes during the 1990s in household average combined (sewage and water) bills in several OECD countries (for Germany and Luxembourg, data relate only to public water supply). Consumer Price Index data has been used to convert selected nominal increases into "real" changes, which have then been expressed on an "annual equivalent" basis.
- Among the larger price increases indicated are those for Denmark, a country that has been actively trying to address its groundwater quality problems via changes in water demand. France has also experienced very large real increases in water charges over the first half of the 1990s, largely due to the impending implementation (1998-2005) of the European Commission's Urban Waste Water Treatment Directive. Australia is another example of a country that has demonstrated a willingness to move actively toward the implementation of a "full cost recovery" approach. Hungary's large real price increases reflect the net effects of: (i) significant reductions in water-related subsidies after 1992 (even though subsidy levels still remain quite high); (ii) sizeable increases in real prices related to infrastructure improvements; and (iii) reduced consumption levels overall, resulting in the need for higher per unit charges to recover the total costs of the system.

More detailed background reports concerning water pricing practices in the industrial, agricultural, and household sectors can be downloaded free-of-charge at the following web-site: <http://www.oecd.org/env/online.htm>

To purchase *The Price of Water: Trends in OECD Countries* (ISBN: 9264170790; cost FF 170), and other OECD publications, visit the OECD Online Bookshop at <http://www.oecd.org/bookshop> or send an email to [sales@oecd.org](mailto:sales@oecd.org)

For more information about the **OECD's work on water pricing**, contact:

*Tom Jones*, Economics Division, Environment Directorate

Email: [tom.jones@oecd.org](mailto:tom.jones@oecd.org) Electronic Fax: +33 (0)1 44 30 61 79

For more general information about the **OECD Environment Programme, 1999-2000**, visit our website at:

<http://www.oecd.org/env/> or send an Email to [env.contact@oecd.org](mailto:env.contact@oecd.org)