

# Improving Urban Wastewater Tariffs and Management

Peoples Republic of China

中国城市污水处理  
收费和管理的改善



Ministry of Construction  
Peoples Republic of China

建设部

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In conjunction with strong economic growth and social improvements over the past two decades, the Peoples Republic of China (PRC) has witnessed unparalleled levels of urbanization. Estimates indicate that by the year 2015, the PRC will comprise over 4,000 cities, corresponding to a rise in the urban population from the current level of 36 percent of the total population to approximately 55 percent. For a nation with an existing population approaching 1.3 billion, this magnitude of urbanization is globally unprecedented.

在过去 20 年中，随着快速的经济发展和 社会进步，中国的城市化水平有了极大的提高。到 2015 年，中国的城市数量可能达到 4000 个，相应的城市化率将由 36% 提高到 55%。对于一个 13 亿人口的大国来说，这样的城市化水平是空前的。

## Environmental Consequences 环境后果

Urbanization is however placing significant demands on urban infrastructure, particularly the water and wastewater sectors. Water is in short supply in the PRC, especially in the north, and the current exploitation of surface and groundwater resources is a major concern.

但是，城市化对于城市基础设施，尤其是水和废水领域，提出了更高的要求。中国（特别是华北地区）的水资源比较短缺，地表水和地下水的开发是需要关注的问题。

Wastewater discharges are also resulting in significant environmental pollution, particularly to the river systems and aquifers. Throughout the 1990s, the percentage of heavily polluted rivers rose from approximately 30 percent to nearly 50 percent, although total wastewater treatment remained at only a fraction (less than 10 percent) of total water supply capacity. Accelerated urbanization was outpacing the ability to control pollution, which increasingly threatened valuable water resources and the natural environment.

污水排放也导致了严重的环境污染，特别是河流和地下水。上个世纪的 90 年代，得到处理的污水仅占一小部分（低于 10%），而受到严重污染的河流却从 30% 增加到了 50%。城市化的发展超过了污染控制的速度，对于可利用的水资源和自然环境的威胁也在逐渐增加。

## Government-Led Response 政府采取的措施

In response, the Government implemented key environmental policies in order to progressively improve wastewater management and reduce environmental pollution. This included the formalization of regula-

tory standards to control wastewater discharge and effluent quality, and progressively prohibit discharges of untreated wastewater into the environment.

对此，中国政府实施了关键性的环境政策，以逐步改善环境管理，消除环境污染。主要包括出台污水排放和出水水质的法规标准，逐步禁止污水未经处理排入环境等。

Dramatic improvements are being achieved as a direct result of the Government initiatives, notably through the construction and operation of wastewater treatment plants and transmission systems. Currently, there are approximately 400 wastewater treatment plants in the PRC, and over 250 are currently being commissioned. This is resulting in a significant increase of treated wastewater, which currently is estimated at approximately 35 percent of the total, a seven-fold increase from a decade ago.

政府的措施（特别是污水处理厂和排水系统的建造）所带来的直接效果就是环境的显著改善。目前中国已经建成了大约 400 座污水处理厂，还有超过 250 座正在建设之中。这使得污水处理率有了很大提高，达到了 35%，是 10 年前的 7 倍。

As a consequence, wastewater sector investment has risen five-fold over the past decade, and is set to continue over the medium-term at the current capital investment level of over Yuan 15 billion per year. At this scale of investment, the Government has recognized that strengthened financial management systems are crucial to secure appropriate levels of financing, provide for adequate cost recovery and ensure longer-term financial sustainability. In line with parallel water sector reforms, there is also a recognized need to progressively transfer the principal

wastewater funding mechanism from central and municipal government sources to localized, user-pay tariff modalities. This is particularly advantageous for the financing of large investment projects, and provides a way to achieve progressively higher levels of cost recovery and multi-channel investment.

其结果是，污水领域的投资在过去十年中翻了五番，在未来还要继续保持每年 150 亿元的基建投资规模。对于这样大的投资规模，政府已经认识到需要加强财务管理体系，并且在水行业改革的同时逐步转变投融资机制，由原来的中央和地方财政拨款转变为地方自筹和使用者付费的形式。这对于大型的投资项目是有利的，为逐步达到较高的成本回收和多渠道融资水平提供了路子。

## The Need for Tariffs and Financial Management Reforms 水价和财务管理改革的需求

It is estimated however, that only 300 of the 667 cities of the PRC currently implement wastewater tariffs, and of these, only a few are able to achieve full cost recovery. At the local government level, there is a need to strengthen the legal basis and regulatory frameworks for tariff implementation, and also to formalize procedures for tariff application, review, approval and regulation. Greater public involvement and awareness is also necessary, as is the need to ensure access and affordability for the poor.

据估计，全国 667 个城市中仅有 300 个开征了污水处理费，这其中只有少数达到了全成本回收。对于地方政府来说，需要完善收费的法律基础和法规框架，并制定出收费申请、审查、批准和管理的程序。同时，有必要引入更多的公众参与了解，保证贫困阶层能够享受到服务并具备承受能力。



## National Tariff Guidelines and Calculation Methodologies

中国城市污水处理收费管理办法和测算模型

In response, the Ministry of Construction and other Chinese Government agencies, in conjunction with the Asian Development Bank, have developed a series of draft tariff and financial management reform recommendations in order to significantly improve urban wastewater management in the PRC. These include draft national guidelines for wastewater tariffs and calculation methodologies, together with a comprehensive package of financial, economic, social and administrative reform recommendations.

为了改善中国的城市污水管理状况，建设部、其他部委与亚洲开发银行一起，提出了一系列污水处理收费和财务管理的建议草案。这包括污水处理收费的测算模型，有关财务、经济、社会和行政管理改革的一揽子建议。

The draft national tariff guidelines are based on applicable laws and regulations, and aim to strengthen the management and financing of urban wastewater systems, accelerate infrastructure development and protect the rights and benefits of the people and enterprises. The guidelines mandate the establishment of tariffs for every urban wastewater discharger in order to ultimately achieve full cost recovery associated with the construction, operation, maintenance and management of wastewater systems and treatment facilities. In the future, wastewater tariffs are to be classified as a business service fee, based on the "Polluter Pays" principle, and designed to generate adequate revenues to sustain wastewater utilities in the longer term.

管理办法立足于法律法规的适用性，致力于加强城市污水系统的融资和管理，推动基础设施建设，保护消费者权益。管理办法要求对所有的排污者收费，以便最终达到污水处理设施的建设、运营、维护和管理的全成本回收。根据“污染者付费”原则，污水处理费以后将属于经营服务性收费，其水平应当能够产生足够的收入，来维持污水处理设施的长期运行。



The recommended tariff structure is a volume-related usage charge, based initially on metered water consumption for every customer, with a transition over time for industrial and selected commercial dischargers to a two-part tariff structure relating to wastewater volume and pollution loadings.

建议污水处理收费采用按流量计费的结构，对所有用户按用水量收费，将来逐步对工业和特定商业用户实施按照水量和污染负荷收费的两部制结构。

Also stipulated in the draft guidelines are necessary wastewater charging requirements, methodologies for tariff collection and adjustment, the management and supervision of wastewater charges, and penalties for non-compliance, non-payment and tariff misuse. In addition, tariff calculation methodologies have been formulated, in order to guide cities in the formulation of appropriate tariff structures.

管理办法中还规定了污水处理收费的必要条件，收费和调价方法，收费的管理和监督，违约、欠费和滥用行为的处罚。此外，为了引导各城市确定适宜的收费结构，还建立了收费测算模型。

An international country review has also been completed, which reviewed wastewater tariffs and institutional arrangements in eight selected nations, drawing relevant conclusions having regard to the circumstances found in the PRC. Other guidance documents have also been developed, including guidance for private sector participation in the sector, tariff approval procedures, and alternative cost recovery mechanisms. Four case study cities have also been assessed in order to evaluate wastewater tariff options and propose wastewater tariff structures in these cities. These include Chongqing, Zhangjiakou, Tangshan and Changzhou.

国际经验研究分析了八个国家的污水处理收费和机构设置状况，根据中国国情得出了相应的结论。其它研究包括：污水行业的民营化、收费审批程序、备选的成本回收机制等。报告对四个试点城市进行了研究，以评估不同的收费模式，并对这些城市的收费结构提出建议。这四个城市分别是重庆、张家口、唐山和常州。

In summary, the draft guidelines, tariff calculation methodologies and reform recommendations are designed to optimize the cost recovery of capital investments, operation and maintenance and administration needs, and encourage multi-channel and private sector intervention in wastewater management. Once approved, the implementation of the recommendations will significantly strengthen government institutions and functions, improve wastewater cost recovery and efficiency, progressively reduce service provider reliance on government subsidies, protect consumer rights, and promote water re-use and conservation.

总而言之，污水处理收费管理办法、收费测算模型和改革建议的目的是，对于污水设施的建设、运营、维护和管理成本的回收进行优化，鼓励多渠道融资和民营资本进入污水管理领域。一旦这些成果得到批准实施，必将大大加强政府职能，改善成本回收水平和效率，逐步降低服务商对于财政补贴的依赖性，保护消费者权益，促进节水和污水再生利用。

### Proposed Action 行动建议

The Ministry of Construction of the Chinese Government is currently in the process of submitting the draft national tariff guidelines to the PRC State Council for approval, following which all levels of government will be required to implement the guidelines. It is also envisioned that the associated institutional, financial and other recommendations will be implemented to further support effective tariff reform and improve sector sustainability.

国家建设部正在将污水处理收费管理办法上报国务院审批，获批之后各级政府将据此实施管理办法。可以预见的是，本研究中关于机构、财务和其它建议将用于支持水价改革和提高可持续发展能力。

### Further Information 更多信息

The draft national tariff guidelines, tariff calculation methodologies and associated recommendations can be accessed on the following website:

有关污水处理收费管理办法、收费测算模型和有关建议可以从以下网址获得：

[www.adb.org/documents/prcwastwatertariffs.htm](http://www.adb.org/documents/prcwastwatertariffs.htm)

**For Further Information, Visit our Website;**

要获取更多信息，请浏览我们的网站：

**[www.adb.org/documents/prcwastewatertariffs.htm](http://www.adb.org/documents/prcwastewatertariffs.htm)**

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