

署長的話

Director's Statement



食水是珍貴資源。香港水務署和世界大部分人口密集地區的水務部門一樣，致力確保食水供應持續不斷，水質符合國際認可的標準。

氣候變化所造成的後果繼續影響到食水水源，我們現更需以全面而宏觀的角度，優化用水供應和需求。儘管食水和海水的供應仍十分穩定充足，我們卻不會安於現狀，並會繼續推行具體的措施，保護水資源和節約用水，我們亦會盡可能發展替代水源。

Fresh water is a precious resource. The Water Supplies Department of Hong Kong, like water authorities in most population centres around the world, endeavours to make sure that water supplies are sustainable, meeting internationally accepted quality targets.

The consequences of climate change continue to influence the sources of fresh water supply, we are taking a broad-based holistic view in optimising supply and demand. Whilst supplies — both fresh water and sea water — still remain very much assured, we are in no complacency and keep on implementing concrete measures to protect and conserve these supplies and, where possible, develop alternative sources.

馬利德工程師
Ir MA Lee Tak

水務署署長
Director of Water Supplies

東江水輸港協議

一如以往，本港約七至八成食水由廣東東江輸入。其餘的用水主要來自本地集水區收集所得的雨水，並在可行的情況下輔以海水和再造水，作沖廁及其他非飲用用途，務求減少對食水的需求。

從東江輸入的大量食水，佔東江年均流量約百分之三。廣東當局實施的東江水分配方案，充分確保這個水源的可持續性。我們已與廣東省當局就未來三年的東江水輸港協議展開磋商，本人有信心新的協議會在年底前落實，以及新協議繼續容許我們參照集水區收集所得的雨量和水塘存水量，按月彈性輸入所需的水量。廣東當局亦再次向我們保證，會繼續著重保護東江的水源環境，確保輸港的用水水質符合相關的質量標準。

替代水源

在發展替代水源方面，我們現正檢討使用再造水的質量標準，並著手草擬應用守則和指引。計劃中，洗滌污水會經過處理，然後輸送給用戶作沖廁和園林灌溉用途。我們計劃於私人樓宇和公共屋邨推廣使用再造水。

海水化淡仍是香港具有龐大發展潛力的替代食水資源。我們已在將軍澳為可能興建的海水化淡廠預留土地，並期待開展初步策劃和勘察研究，以確立這所化淡廠的技術可行性和成本效益。

Dongjiang Supply Agreement

Around 70 to 80 per cent of our fresh water supply continue to be drawn from the Dongjiang in Guangdong. The balance of our requirements is met by the rainwater collected within our local catchments, with sea water and reclaimed water used for toilet flushing and other non-potable uses where possible to trim fresh water demands.

The large volume of water taken from the Dongjiang represents some 3 per cent of the annual flow volume of the river. This source is well sustainable with the implementation of the Dongjiang Water distribution plan by the Guangdong authorities. We have begun negotiations with the Guangdong authorities on a further three-year agreement covering our fresh water uptake from the Dongjiang. I am confident that we will have the new agreement in place by the end of this year and that it will continue to give us flexibility in terms of the volume of water we need to draw down on a monthly basis, taking into account rainfall within our own catchments and the storage position of our impounding reservoirs. The Guangdong authorities have also assured us that they will continue to attach great importance to the protection of the Dongjiang's water environment to ensure that the quality of water piped to Hong Kong meets relevant quality standards.

Alternative Water Sources

On the development of alternative water sources, I am pleased to report that we are currently reviewing the quality standards and drafting the code of practice and guidelines for the use of recycled water. Under the plan, grey water is to be treated and distributed for toilet flushing and landscape irrigation. We plan to promote the use of recycled water in both private sector and public housing estates.

Desalination still offers a great potential in terms of an alternative fresh water resource for Hong Kong. We have earmarked a site for a potential desalination plant at Tseung Kwan O and look forward to conducting preliminary planning and investigation studies to establish the technical feasibility and cost effectiveness of the plant.

署長的話
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用水流失管理

同時，我們的用水需求管理仍集中於減少供水系統用水的流失，以及向全港市民推廣節約用水，以保障現有的食水來源。我們採取了多管齊下的方式，減少供水系統用水的流失，包括為現有系統進行有效的維修保養工程、投放資源開發偵測滲漏和水壓管理的技術，以及持續推行更換老化資產的計劃。

世界各地大部分城市都面對用水流失的問題。世界水期刊最近發表報告，指東南亞地區用水流失的百分率相當高，達三至六成。水管因受到路面交通和地面移動或下陷等惡劣外來因素影響，導致容易損壞。在香港，因水管網絡老化而造成的年均流失率約兩成，我們會繼續致力把滲漏率減低。過去一年，我們成功測試了數種儀器，可在不用停止供水的情況下，讓我們檢查和監測水管的狀況。此外，我們亦正利用統計和分析數據軟件制訂預測模式，務求採取主動，盡早找出系統內易出問題的地方，以減少水管爆裂的情況。

我們現時調派專業和技術人員監控本地的用水情況。由於用量或流量的變化可顯示系統出現滲漏或非法取水的情況，因此相關的事故可更迅速獲得處理。

Managing Water Loss

Meantime, our focus of demand management remains on reducing water loss along our distribution system and the promotion of community-wide water conservation so as to safeguard our current sources of fresh water. We have implemented a multi-pronged approach to reducing water loss along the supply system by effectively performing the repair and maintenance of our existing system, investing in leak detection and pressure management technology and continuing a programme of replacing aging assets.

Water loss is a problem faced by most cities around the world. The World Water Journal recently publicised that water loss in South East Asia areas stands at a relatively high percentage of 30 to 60 per cent. Water mains are subjected to harsh external influences such as road traffic and ground movement/ subsidence and are vulnerable to damage. In Hong Kong our annual loss, from our aging water main network, stands at around 20 per cent – a level we are continuing to trim down. Over the past year, we have successfully tried out several tools that will enable us to inspect and monitor the condition of water mains without having to shut down the supply of water to the public. We are also developing predictive models using statistical and analytical softwares to help us identify system vulnerability for proactive reduction of main bursts.

We are deploying professional and technical staff to monitor district consumption levels. Changes to consumption or flow profiles may indicate leakage or illegal tapping of the system and the related incidents can be attended to more quickly.

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部門秘書
Departmental Secretary

提高能源效益

在供水行業，對持續發展所作的任何承擔必須顧及能源的使用。過去一年，我們採取措施，以減少對不可再生能源的依賴，其中包括在屯門濾水廠興建中的小型水力發電設施。在發電設施投產後，每年總發電量可達2 900兆瓦時，相等於減少了燃燒化石燃料所排放的2 030噸二氧化碳，以及把濾水廠的用電量減少約一成。

我們亦與香港理工大學合作，成功建造了一個特別設計的協調液壓驅動裝置，為沒有電力供應或供電成本昂貴的監測設備和水錶供電。此外，我們現正與香港科技大學共同研發一台直立式風力渦輪機，為位於香港島的紅山濾水廠供應可再生能源。

我們與本港和海外機構共同開發的技術，長遠而言，對節省能源和成本都至為重要。

確保用水安全

水質仍維持在高水平，我們會繼續加強供水鏈沿線的全面監測系統的精確性。日本福島核電廠發生核事故後，我們即時盤點了監測供水輻射水平的系統，結果再次確認香港現時所採用的水質監測方式全面有效。福島事故發生以來，本港供水的輻射水平並無錄得可量度的變化。



Improving Energy Efficiency

In the water industry, any commitment to sustainability must embrace energy use. Over the past year, we have taken steps to lessen our reliance on non-reusable energy. Initiatives include a small scale hydro-power plant under construction in the Tuen Mun Water Treatment Works. The total power generated after plant commissioning can reach 2 900 megawatthours annually, which is equivalent to reduction of 2 030 tonnes of CO₂ emission from burning fossil fuels, and will reduce power consumption at the plant by around 10 per cent.

We have also successfully collaborated with the Hong Kong Polytechnic University in building a specially designed in-line hydro-power harnessing device which will supply electricity to monitoring equipment and water meters in areas where electricity supply is either unavailable or too costly to provide. Together with the Hong Kong University of Science and Technology, we are developing a vertical type wind powered turbine to provide renewable energy to the Red Hill Water Treatment Works on Hong Kong Island.

The technologies we are studying, both in Hong Kong and in liaison with overseas institutions, have long term importance from both the energy saving and cost saving perspectives.

Assuring Water Safety

Water quality remains high and we continue to add rigour to our extensive monitoring systems along the water supply chain. A stock-take of the monitoring systems for radiation levels in the water supply, made immediately after the nuclear incident at the Fukushima nuclear power plant in Japan, reaffirmed the comprehensiveness of the existing water quality monitoring regime in Hong Kong. No measureable change in the radioactivity level of our water supply has been detected since the incident.

鼓勵市民保養大廈食水系統。
Encouraged the public in proper maintenance of plumbing system.



與參觀濾水廠的小學生合照。
Photo taken with the primary school students in Water Treatment Works Open Day.



向表現出色的員工致意。
Compliments to the staff with outstanding performance.

提高節約用水意識

公眾的理解和廣泛支持對我們的工作至為重要，尤其是在提高節約用水意識方面。我們所推行的公眾教育運動，會繼續著重鼓勵市民有責任地用水。我們今天以可持續的方式使用水資源，日後定會惠及子孫。透過支持善用水資源的措施、推廣節約用水裝置，以及舉辦節約用水設計比賽，我們持續提高市民節約用水的意識，並改變他們用水的態度和習慣。藉著社會各界積極的參與，我們能確保把節水信息傳遞給目標對象。學生把節約用水的信息帶給家人；物業管理公司和飲食行業業界制訂節約用水的方式，並在日常營運中付諸實行。

Enhancing Conservation Awareness

It remains important to ensure that we have widespread public understanding of and support for the work that we undertake, particularly in terms of conservation awareness. Our public outreach processes keep the importance of responsible use of water on the agenda of the members of the public. Today's sustainable practices will enable future generations to flourish. From the endorsement of good water use practices and the promotion of water saving devices through to water conservation design competitions, we continue to raise public awareness and to change attitudes and habits. By engaging with different sectors of the community, we are able to ensure our messages reach the target audience. Students take water conservation messages home to their families; property management companies and the catering industry identify water saving practices and make them integral to their business.



為水務署龍舟隊打氣。
Cheering for the WSD Dragon Boat Team.



主禮節約用水設計比賽啟動儀式。
Officiated at the Water Conservation Design Competition Launching Ceremony.

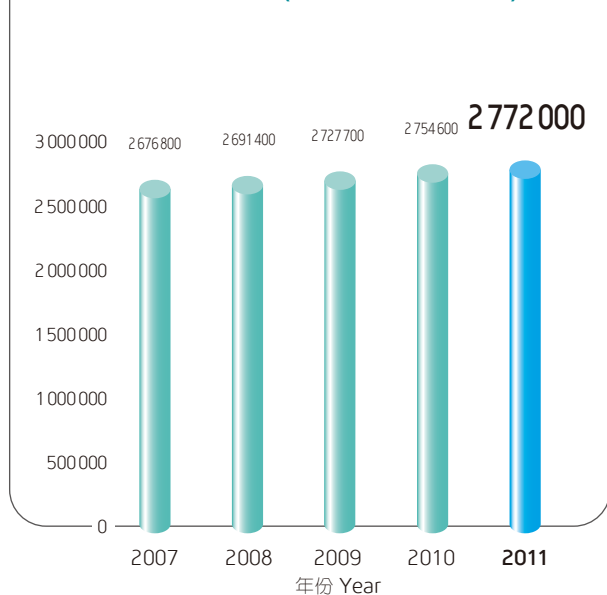
承先啟後

今年，香港供水服務踏入160年。前人早在十九世紀就高瞻遠矚，明白到穩定而清潔的供水對香港發展的重要，並開始為此著力工作，我們今日承傳這項任務，實在值得驕傲。我感謝各級員工、諮詢小組的成員和工商界的合作伙伴對部門不斷的支持，以及為我們供水目標所作的承擔。

Upholding the Legacy

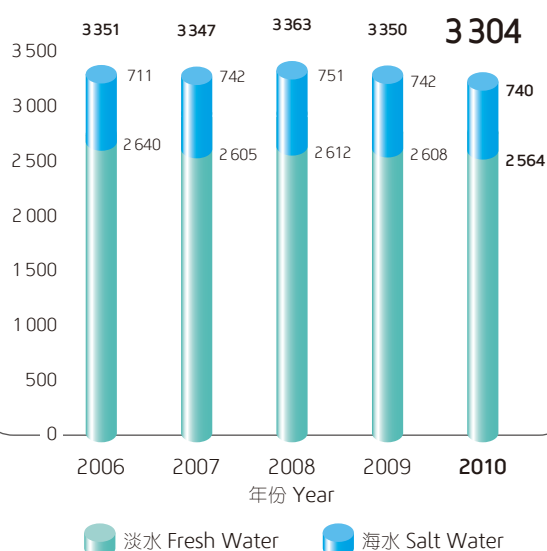
This year marks 160 years of public water supply in Hong Kong. We are proud to be continuing the work started by our predecessors who, even in the 19th century, recognised the importance of a reliable and clean supply of water for the development of Hong Kong. I thank our staff at all levels, the community members of our advisory groups and our business and industry partners for their ongoing support and commitment to our goals.

客戶數目(截至二零一一年三月三十一日)
Number of Accounts (as at 31 March 2011)



總平均日耗水量
Total Average Daily Water Consumption

百萬公升/日 million litres per day



今天，我們擁有所需的元素，能穩定地提供清潔、安全和優質的用水。然而，我們仍需持續不懈，提升效率，確保供水可持續地發展。為迎接挑戰，我們要精益求精，善用科技，定時參照世界各地供水機構的表現，取長補短。此外，我們與鄰近珠江三角洲和以外地區繼續緊密合作，亦至為重要。為了確保未來有更好的生活，我們必須集思廣益，人人都作出承擔。

Today, we have the elements in place to deliver a reliable supply of clean, safe, quality water. However, efficiency and sustainability are ongoing imperatives. To meet the challenges, we need to continue to evolve, maximising the use of technology and regularly benchmarking our performance against other water authorities around the world. It is also important that we continue to work closely with our neighbours in the Pearl River Delta and beyond. Only through collective wisdom and individual commitment can we ensure a better future for everyone.



馬利德
水務署署長
二零一一年六月三十日

Ir Ma Lee Tak
Director of Water Supplies
30 June 2011