

Supporting utility	Bureau of Waterworks Tokyo Metropolitan Government ( <b>BWTMG</b> )		Case No.	6
About recipient utility			Data from	2011-2014
Recipient utility	<ul style="list-style-type: none"><li>Ministry of Energy, Green Technology and Water (<b>KeTTHA</b>) In Malaysia</li><li>Penang Water (Perbadanan Bekalan Air Pulau Pinang: <b>PBAPP</b>)</li></ul>			
Cooperation year	January 2014 – November 2016			
Service area	State of Penang, Malaysia			
Service population	Urban area: Unknown Rural area: Unknown Total: 1,646,000 <sup>1</sup>	Service coverage	Urban area: 100% <sup>1</sup> Rural area: 99.7% <sup>1</sup>	
Water distribution	813,000 m <sup>3</sup> /d <sup>1</sup>	Maximum water distribution	Unknown	
Water consumption per capita	Unknown	NRW	18.25% <sup>1</sup>	
Water source	Rivers <sup>2</sup>	Pipe length	4,294 km (≥ 100 mm) <sup>1</sup>	
No. of WTP <sup>3</sup>	10	No. of Employees	1,263	
Water treatment	Chemical injection + Coagulation + Sedimentation + Filtration <sup>1</sup>			
Water rates	0.074 JPY/10 m <sup>3</sup> (1 JPY≒0.03 MYR) <sup>4</sup>			
About technical cooperation to KeTTHA				
Background	<ul style="list-style-type: none"><li>■ Building a relationship of trust through technical cooperation consisted of water facility tours and technical training conducted in Tokyo since 2010.</li><li>■ Conducted technical training (including measures to reduce non-revenue water) locally and in Japan as part of JICA's Technical Cooperation Project from 2011 to 2013.</li><li>• In 2012, the Director General of the Ministry of Energy, Green Technology and Water (<b>KeTTHA</b>)’s Waterworks Bureau requested the Director General of the Bureau of Waterworks Tokyo Metropolitan Government (<b>BWTMG</b>) to assist in their non-revenue water reduction.</li><li>■ Since the above-mentioned technical cooperation, there have been multiple requests from the Malaysian side to assist in their human resources development.</li></ul>			

<sup>1</sup> Based on the annual report 2014 of PBAHB

<sup>2</sup> Based on the website of PBAHB

<sup>3</sup> WTP = Water Treatment Plant

<sup>4</sup> Based on the Tariff 2015 of the PBAPP website on 26 May 2015

Cooperative scheme	<ul style="list-style-type: none"> <li>■ JICA Technical Cooperation Project</li> <li>■ Partner Organization: KeTTHA, PBAPP</li> <li>■ Supporting organization: Tokyo Water Co., Ltd. (BWTMG)</li> </ul>
Recipient utilities' challenges	<ul style="list-style-type: none"> <li>■ Stable water supply management</li> <li>■ Development of human resources who can contribute to non-revenue water reduction</li> </ul>
Technical cooperation provided	<ul style="list-style-type: none"> <li>■ Development and utilization of a training field for leakage prevention and plumbing</li> <li>■ Training of 15 staff members of PBAPP in non-revenue water reduction measures <ul style="list-style-type: none"> <li>☀ Dispatched staff to provide technical guidance</li> <li>☀ Accepted trainees and conducted training to learn about related Japanese technology, construction management, and quality control</li> </ul> </li> <li>■ Conducted training for all states of Malaysia with PBAPP staff serving as instructors <ul style="list-style-type: none"> <li>☀ Dispatched operational staff to prepare training materials and give guidance to provide training using these materials</li> <li>☀ Hosted workshops where PBAPP staff conducted practical training on non-revenue water reduction measures for the selected trainees from each state (77 trainees in total)</li> </ul> </li> </ul>
Future plans and prospects	<ul style="list-style-type: none"> <li>■ In addition to the training of instructors, this project has created an organizational framework that enables human resources development based on BWTMG's technology and know-how even after the project completed, including the preparation of training fields and training textbooks. By utilizing this framework, BWTMG will continue its contribution to their human resources development.</li> </ul>

Pictures



▲ Developed training field



▲ Training at the training field



▲ Group photo