| Supporting utility | Water and Sewer Bureau of the City of Kitakyushu (**WSBK**) | Case No. | 4 |
|---|---|---|---|
| On recipient utility | | Data from | 2015-2017 |

| | | | |
|---|---|---|---|
| Recipient utility | Eight provincial cities in Cambodia | | |
| Cooperation year | 1999 to Present | | |
| Service area | • Kampong Cham<br>• Komponom<br>• Siem Reap<br>• Battambang<br>• Pursat<br>• Sihanoukville<br>• Subarien<br>• Kanpot | | |
| Service population※1 | • Urban area: 301,000<br>• Rural area: N/A※2<br>• Total: 301,000 | Service coverage※3 | • Urban area: 41.5%<br>• Rural area: N/A<br>• Total: 40.6% |
| Water distribution※4 | 65,000 $m^3$/day | Maximum water distribution※5 | Distribution capacity: 77,000 $m^3$/day |
| Water consumption per capita※6 | 90-150 L/person/day | NRW※7 | 10.4% |
| Water source | • Rivers<br>• Groundwater | Pipe length※8 | 1,034 km |
| No. of WTP | 8 | No. of Employees※9 | 351 |
| Water treatment | Coagulation + Sedimentation + Rapid filtration + Chlorine Disinfection | | |
| Water rates※10 | 3.3USD/10m3 (1USD=4,000KHR) | | |

※1 Data from a 2015 human resources development project.
※2 N/A = Not available
※3 Data from a 2015 human resources development project.
※4 Data from a 2015 human resources development project.
※5 Ibid.
※6 Data from a preliminary report for the preparation of assistance.
※7 Data from a 2015 human resources development project.
※8 Ibid.
※9 Ibid.
※10 Water rates based on the average of the eight provincial cities as of 2017: 1322.5KHR/m3 x 10m3

| On technical cooperation | |
|---|---|
| Background | • The Cambodian civil war ended in 1991, but it devastated water supply facilities as well as claimed many human resources in Phnom Penh. At the time, the water supply system was almost inactive with NRW ratio over 70%.<br>• Aids from various countries enabled the post-water reconstruction of the water supply facilities. However, as the reconstruction progressed, a lack of human resources became apparent to operate and maintain the water supply system appropriately.<br>• The Japan International Cooperation Agency (**JICA**) asked Japan's Ministry of Health, Labour and Welfare (**MHLW**) to send Japanese water experts to Cambodia for human resources development. Upon the request, MHLW consulted with the Water and Sewer Bureau of the City of Kitakyushu (**WSBK**), which agreed to send their staff to Cambodia.<br>• In 1999, WSBK's first staff member was sent to the Phnom Penh Water Supply Authority (**PPWSA**). |
| Cooperative scheme | • Cooperation framework: JICA Technical Cooperation Project<br>• Regulatory agency in Japan: MHLW<br>• Regulatory agency in Cambodia: Ministry of Industry and Handicraft<br>• Cooperative utility: PPWSA |
| Recipient utilities' challenges | • Operation and maintenance of water supply facilities<br>• Distribution management<br>• Water quality analysis<br>• Water treatment process<br>• Sustainable service management<br>• Financial management<br>• Customer satisfaction |
| Technical cooperation provided | To help with an appropriate water governance, a highly comprehensive support is being provided under The Capacity Building for Water Supply System in Cambodia Phase3. The scope of the support concerns establishing a water supply law as well as improving a service management.<br><br>Specifics of the support are as follows:<br>➢ Dispatch of experts (PPWSA)<br>• Support operation and management of water treatment facilities<br>➢ JICA technical cooperation project (PPWSA)<br>• Provide technical expertise regarding facility operation and water |

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|---|---|
| | distribution block management<br>➢ Technical support for water supply system (PPWSA)<br>• Water distribution management<br>• Operation and management of water treatment plant<br>• Facility maintenance<br>• Water quality analysis<br>➢ The Capacity Building for Water Supply System in Cambodia Phase2 (eight provincial cities)<br>• Water quality analysis<br>• Water treatment process<br>• Maintenance of electrical facilities<br>• Maintenance of machinery<br>• Maintenance of distribution facilities<br>➢ The Capacity Building for Water Supply System in Cambodia Phase3 (eight provincial cities)<br>• Development of customer ledgers<br>• Development of water supply asset ledgers<br>• Development of financial statements<br>• Expansion of water treatment plants<br>• Preparation of fiscal plan |
| Future plans and prospects | • WSBK needs to utilize its human resources and budgets as efficiently as possible in implementing related projects, considering a demand for international cooperation is on the rise in the field of water supply and wastewater services.<br>• WSBK will further increase the efficiently of related projects through a closer collaboration and information exchange with JICA and various regulatory and donor agencies. |
| Figures and photos |  <br>▲ Photo from the Cambodian Human Resources Development Project |