

# Executive summary

## An Avoidable Crisis

### WASH Human Resource Capacity Gaps in 15 Developing Economies

Shortages of human resources in the Water, Sanitation and Hygiene (WASH) sector will undermine the progress of many countries over the last two decades to increase access to water and sanitation. It will impede socio-economic development of those countries that remain off-track to meet the MDG water and sanitation targets, and raises questions about how realistic WASH targets under the Sustainable Development Goals will be.

In this report, the first of its kind, the IWA provides an overarching recommendation for the development of national capacity development strategies that have high-level political buy-in with involvement from multiple actors to ensure sustained, adequate professional and technical capacity. The report also calls for concerted action at regional and global level to collect relevant human resources data, and perform further research to strengthen the evidence base on which action plans and strategies can be built.

The adoption of the Millennium Development Goal (MDG) target 7c, to “halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation”, has prompted significant investment in infrastructure, technological innovation and institutional reform.

This investment has not been accompanied by the necessary focus on the size, competencies and enabling environment for the human resource base needed to design, construct, operate and maintain such services to meet the target and go beyond, towards universal coverage. Many developing economies are lacking significant numbers of water professionals, and the necessary knowledge, experience and specialist skills to meet the rising demand for water and sanitation services.

This is the first time dedicated research has been carried out to establish a baseline of the dimensions of the crisis facing human resources in the WASH sector in 15 developing economies. The initial study was carried out in 5 countries; a second phase was conducted in 10 countries using an adapted methodology. This research informs governments, industry and educational institutions to address human resources gaps.

#### Key data

- In 10 countries reviewed in the second phase of the study there was a cumulative shortfall of 787 200 trained water and sanitation professionals in order to reach universal coverage;
- Mozambique needs to double the number of trained water professionals (shortage is 11 900) to meet targets; whilst the majority is in water sector, most WASH technical field personnel are required in the sanitation sector (62%);
- 98% of the shortfall in human resources in Ghana is in the sanitation sector;
- Papua New Guinea needs to multiply its current WASH workforce by a factor of 9 in order to achieve universal coverage;
- Philippines requires 82 600<sup>i</sup> additional Water and Sanitation technical field personnel and para-technicians<sup>ii</sup>;
- Bangladesh<sup>iii</sup>, reported it required 44 000 additional HR even when the MDG targets had almost been reached; this gap is attributed to the need to maintain progress and focus on operation and maintenance of systems;
- On average 16.7% of the workforce in the 15 countries were reported to be female professionals.

<sup>i</sup> Assuming low productivity rates (low productivity being: 1 staff/186 connections).

<sup>ii</sup> In the Philippines water and sanitation facilities are categorized in 3 levels. Levels I and II water service facilities are operated and maintained by paratechnicians, who are community members that have been provided some short training in their required tasks.

<sup>iii</sup> First phase of the study.

# Key findings

**There are not enough appropriately skilled water professionals to support the attainment of universal access to safe water and sanitation.**

The current availability of data on the human resource demand, capacity, supply and shortages for water and sanitation services, is poor. Without credible evidence to support estimates of the real human resources shortages across all components of water, sanitation and hygiene provision, the WASH sector will not be able to make a business case that will attract sufficient investment.

- Sanitation services are significantly undermined by a poor supply of professionals when compared to water services;
- Low levels of access to and inadequate coverage of courses in tertiary education institutes is a significant bottleneck to meeting human resource demands;
- Female professionals are underrepresented, particularly in technical fields. This trend is mostly observed in the public and private sectors, the non-governmental sector has a greater gender balance; the number of female graduates from technical course at universities was also reported to be low;
- Operation and maintenance of water and sanitation systems are chronically neglected, with human resources inadequately allocated;
- Education and skills development requirements to operate and maintain specific technologies have not been appropriately assessed; such assessments would greatly benefit the WASH sector;
- The dependence on communities, volunteers and semi-skilled workers in rural areas is not sustainable without adequate institutional and operational support from local government and structured, formalised support from the professional sector.

# Key recommendations

**Investment in human resources has the potential to have multiple benefits across sectors. Investing in WASH human resource development is investing in health, education, economic and social development.**

Water and sanitation are crosscutting issues, affecting nearly all other elements of socio-economic development within developing economies. Investment in, and strengthening of, the human resource base for the delivery of water and sanitation services can alleviate the pressure on human as well as financial resources in other sectors.

- Investment in the WASH sector has an easily perceptible knock-on effect through improved access to drinking water and sanitation. It can also be a magnet attracting and retaining high calibre professionals for the WASH sector;
- Data collection needs to be strengthened and the quality of data needs to be improved to provide compelling evidence for investment in recruitment, education and skill development in the WASH sector;
- More research on the current or projected levels of funding required to support capacity development, either in its totality, from governments or from the donor community is critical;
- The Sustainable Development Goals must give consideration to the use of human resource capacity data for WASH as an “enabling environment” indicator;
- Appropriate public policies need to be developed and implemented to support job creation, including investing in skills to support labour supply and enabling private sector engagement to stimulate an increase in labour demand;
- Incentives to attract newly qualified and skilled personnel and retain experienced personnel within the sector and reverse a professional drain to other sectors are required;
- Developing specific programmes and promoting greater investment to engage and encourage female participation at the educational level and at the professional level could provide a ‘quick fix’ to human resources shortages, but will require a mind-set shift;
- Improve coordination and cooperation between WASH sector organisations and the education sector to enhance alignment between human resources demand and supply;
- Make technical and vocational training a pivotal element in human resources development in both urban and rural service provision.

# Next steps

## The recommendations argue for the formulation of a national capacity development strategy

The report also calls for concerted action at regional and global level to collect relevant human resources data, and perform further research to strengthen the evidence base on which action plans and strategies can be built.

### The IWA will:

- Work with national stakeholders, including ministries, education and training institutes, professional associations and industry bodies to develop long-term, national strategic action plans for HR capacity development;
- Work with capacity development, education and research institutes to strengthen the data availability, and gain a better understanding of the factors influencing the planning and development of human resources for the WASH sector;
- Lead global advocacy efforts with capacity development and education organisations and contributing to global development goals and reporting mechanisms for WASH.

## Notes

This report is the result of a project, known as the IWA Human Resources Capacity Gap study (HRCG), in which an International Reference group supported the development of a methodology to measure national HR capacities and to identify gaps in a uniform, systematic way that allows comparison of datasets between countries for specific job categories. This methodology was tested in five countries (Bangladesh, Mali, South Africa, Timor Leste and Zambia) 2009 with the “*Mind the Gap*” study, funded by the Department for International Development (DFID) of the United Kingdom. The first study produced valuable insights and lessons learnt about the challenges to human resources capacity development for the sustainable delivery of water and sanitation services. The outcomes informed a revision of the methodology and continued research in six additional countries in Africa (Burkina Faso, Ghana, Mozambique, Niger, Senegal and Tanzania) with support from the United States Agency for International Development (USAID) and four in the Asia-Pacific region (Lao PDR, Papua New Guinea, the Philippines and Sri Lanka) with support from the Australian Agency for International Development (AusAID).