

# Commonwealth Infrastructure Partners

## Training programmes for urban water management

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### Introduction

Commonwealth Infrastructure Partners (CIP) provides specialist training programmes for managers and engineers in urban water management. The programmes provide the practical knowledge and resources to develop international best practice in project design and implementation, as well as in all aspects of project management.

Water supply and water management are fast becoming amongst the most critical sectors in infrastructure and human habitation development. The rapid growth of urban populations, combined with increased demands on rural and industrial water supply, is creating substantial challenges – indeed one of the biggest challenges of this generation.

It is generally agreed that multi-factorial solutions must be found to deal effectively with these challenges. These solutions must cover elements including:

- Water supply: innovative solutions and management
- Water conservation and harvesting
- Wastewater management & recycling
- Optimising the balance between domestic, commercial and industrial water demand and supply
- Integrating urban and rural demands on water resources
- Conservation of the water table
- Minimising pollution of the water supply by industry and urban waste
- Planning for future demands
- Education for families, business and industry
- Effective and relevant regulation
- Optimising funding

Commonwealth Infrastructure Partners (CIP) capacity building and training programmes are designed to equip professionals with the best practical knowledge and strategic tools in their sector, and to develop the ability to understand and anticipate new developments in their field.

### Outcomes and benefits

All CIP capacity building programmes focus on outcomes and benefits for both the client organisation and individual participants. This is accomplished by:

- i. A dialogue in advance of the programme with senior managers in the client organisation to determine:

- a. Priorities for organisational development in the organisation
  - b. Specific challenges and training requirements for the participants in the programme
- ii. Interactive structure for the programme, focusing on practical learning outcomes
  - iii. Ongoing dialogue and feedback with senior managers and participants
  - iv. Modification and refinement of the programme as necessary to optimise results

## **Outcomes and benefits in training programmes in urban water management**

CIP works with urban water sector specialists to develop and deliver capacity building programmes of maximum benefit for water departments, agencies and companies.

We introduce elements of international best practice and integrate these elements with local challenges and requirements. We use examples of best practice, such as the innovative developments by Scottish Water in modernising, upgrading & creating greater efficiency for water supply and wastewater management for the whole country.

CIP programmes aim to solve specific challenges faced by the client organisation and to introduce best practice for long-term solutions in the water sector.

## **Capacity building programmes with sector specialists**

CIP engages sector specialists to design and deliver customised programmes for each sector. Wherever practical, CIP's partners are not only familiar with international best practice but also have high-level experience relevant to the country where a project will be implemented.

CIP's core team and partners have experience across a broad range of infrastructure sectors, and are therefore able to integrate the needs and challenges of a particular sector with the overall development requirements of the country.

## **Integrating management and technical capability**

CIP capacity building programmes focus on integrating management and technical capabilities. Lack of such integration can often be identified as the cause of inadequate project planning or of projects failing to achieve their target. Our specialists have experience in project management in addition to their sector expertise.

## **Capacity building programmes in urban water management**

According to the needs and requirements of the client organisation, our programmes cover topics to develop better expertise in areas including:

- Modernising the supply network and minimising wastage in water supply
- Effective use of grey water, and separation of grey water and black water
- Forward planning for investment and upgradation
- Investment for future needs
- Accurate metering and monitoring of water usage

- Benchmarking against international best practice
- Optimising the use of private sector finance through acceptable methods, using for example the Scottish Water model
  - Thus minimising the burden on public sector finance

### **Integrated Urban Water Management**

CIP capacity building programmes include an understanding of Integrated Urban Water Management (IUWM). Recent successes in this sector have deployed the methods of Integrated Urban Water Management (IUWM), which involves strategies of managing fresh water, wastewater and storm water as components of a comprehensive basin-wide management plan.

IUWM moves water management from ad hoc to integrated solutions. Successful application of IUWM optimises the impact of urban development on the water cycle, leading to a more efficient use of resources.

This has economic benefit and improved social and environmental outcomes, including the fulfilment of sustainability criteria.

### **Duration and level of programmes**

CIP can customise the duration and level of programmes to suit the requirements of the public or private sector client organisation.

- From one- or two-week workshops
- To three- or six-month postgraduate level work-based learning programmes

### **Programme structure**

Programmes are structured to give a combination of knowledge and practical experience.

**Short workshops** include field visits to give practical exposure to the knowledge gained in classroom sessions.

**Longer programmes** follow a work-based learning structure. Where feasible, practical classroom sessions are based near a project location so that participants can observe working practice under the supervision of the programme leaders.

Participants then have a period of work-based experience in actual projects in their work environment.

### **Programme timetable**

The programme timetable can be adjusted to fit the needs of the client organisation and the work schedule of participants.

### **Professional Engineering programmes**

All engineering sectors face challenges arising from a lack of engineering competence at the required professional level. CIP Director Jonathan Ling has pioneered Masters' and Bachelors' Degree Programmes in Professional Engineering, working with the UK Engineering Council and UK universities. CIP offers programmes in Professional Engineering customised for the highways sector.

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