



Case studies on capacity building in the water, sanitation and hygiene sectors

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¹ Consortium comprises Harewelle International Limited, NR International, Practical Action Consulting, Cranfield University and AEA Energy and Environment

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1. Description of enquiry

This 3-day enquiry is to compile a set (a minimum of 5) of case study examples on capacity building in the water, sanitation and hygiene sectors.

The author should aim to include examples from all 3 sectors, to ensure regional diversity in the selection of examples as well as to ensure a rural and urban split. The case studies should also refer to the capacity building of a range of different actors in the sector (i.e. not just engineers, with specific attention to gender).

2. Capacity building case studies based on learning from WEDC

By Sue Coates, Water, Engineering and Development Centre (WEDC), Loughborough University

2.1 Training in equity and inclusion for engineers

Results from researchⁱ looking initially at gender mainstreaming provided insights into how the conventional training of engineers fails to ensure that water and sanitation infrastructure produces net benefits for *all* sections of society. Although engineers – across sector environments: urban and rural; development and emergency – did want practical information about how they could ensure that their product was suitable for the poorest, the marginalised and those in vulnerable situations, this view was far from the norm. Why? Because existing approaches to equity tended to express practical problems of social exclusion in social science terms. On the part of engineers, this did not lead to a willingness to consider, let alone meet the needs of designing infrastructure for all.

Although major strides have been made in access to water and sanitation services, many engineers still consider that their work is neutral – it does not matter who is the user, essentially their needs are the same. This may be true for some technical issues, such as the strength of concrete, but it is obviously not true for some biological differences – as urinals and the need to dispose of sanitary towel waste show. If the infrastructure is produced so that the most disadvantaged can use it, then it should also be accessible to the rest of society who have fewer obstacles to overcome. If the resulting service level improvement is minimal, some will be unwilling to pay to use it, or change their behaviour to accommodate it. To develop appropriate infrastructure for all, engineers need to appreciate the diversity of society and the different opportunities open to people to express their views and influence decisions.

The project started off with conventional training: this focused on the social science rather than engineering issues. Problems occurred though with attracting engineers to attend the programme. Either they did not attend, engage or they did not have the technical responses required. A case was given of a project where a woman had been appointed caretaker of a water system, but she was unable to climb the water tower to maintain it as she wore a sari. The problem was a technical one, as the engineers did not know how to re-design the water tower to suit the user. The focus shifted from looking at “gender” activities to looking at what engineers do in their day-to-day job. Following this workshop, a series of courses was held with a range of technical staff, to test a new approach to training engineers about equity and inclusion, using lots of discussion with the participants to see what their views were. In one case, discussing the issues with managers from Nigerian water utilities, the rights based approach was welcomed by the women on the course, but was treated with opposition by the male participants. A pragmatic,

customer based approach however, whilst not as emotive, was accepted by all as a positive way forward.

Engineers requested new information in a format *and language* that related to engineering, rather than social issues. Quite simply they did not understand – or social scientists were unable to express their ideas in an easily understandable way. For example, supply and demand for the engineer related to quantities of water supplied, for the social scientist it described the way a project is approached and delivered.

The research concluded that above all it was important to capture the engineers' imagination to make them want to take action. The challenge for trainers is to see solutions from the engineers' perspective; providing training for engineers at work that focuses on what engineers think about, rather than social science. Therefore embracing equity and inclusion does not mean that engineers become social scientists, but that the technical activities are carried out with an awareness of social science issuesⁱⁱ.

2.2 Research capacity development

For almost 4 decades, WEDC has been involved in research that has influenced – and continues to influence – the agenda of the water and sanitation sector. Throughout this time research partners, alumni and professional collaborators have identified the need for greater emphasis on:

- Improving the capacity of organisations to manage the research process from agenda-setting through programme and financial management, to communication, outreach and the evaluation of outcome and impact; and
- Supporting the development of institutional capacity through research programme frameworks, financing mechanisms, standards setting, profession-building and outreach-building networks.

The combination of developing institutional and organisational capacities at regional and sub-regional levels will strengthen the research infrastructure - an essential aspect of sustaining research capacity, the development of new knowledge and its use. A distinction should also be drawn between the need for management of the scientific - or content-based – aspects of research and its application, and the management of administrative and financial aspects. The findings of the SPLASH Era-NETⁱⁱⁱ emphasises the importance of developing capacity for both aspects in the context of sub-Saharan Africa.

Developing the skills and technical knowledge of individuals to be more effective researchers and research managers is key to institutional sustainability and to quality, relevant research. Currently too many organisations produce at best 'pedestrian research' that fails to extend enquiry to politician and senior civil servants, and thus influence government and service providers with new ideas. Three major factors contribute to this:

- the researchers' – and peer reviewers' - own educational experience has relied on traditional, standard ways of thinking which in turn are passed to current students in the form of poorly critiqued teaching and narrow, uncreative exploration;
- insufficient reading or meaningful engagement with the political landscape; and

- lack of understanding about how funding, disciplines, institutional structures, hierarchy, and competition influence the research profession.

The situation is retractable yet still too few opportunities exist to help researchers to:

- understand the power relations that surround the uptake of new knowledge, including those affecting alliance and partnership;
- break through traditional disciplinary barriers, expectations and attitudes; and
- tap into local innovation by becoming more proficient at involving the right stakeholders in decision making about research priorities, topics and inputs^{iv}.

2.3 Developing a quality multi-dimensional specialist WASH workforce

Rough estimates suggest that 2.5 million additional engineers, technicians and health promoters are needed to meet the MDG targets^v. Compared with the Health or Education sector the WASH employee population is diverse. A mixed professional group means it is not feasible to have one regulator, association or platform for measuring human resource quality. The capacity building challenge is to provide relevant learning and ongoing professional support that offers sufficient assurance that education and training programmes meet the quality standards established by the relevant professions and sectors. In the push to 'do' capacity building, recruit and deploy, it is unclear how much attention is being placed on accreditation, association and professionalization. Without these assurances it will be difficult to judge the quality of personnel or the standard of education and training they are receiving.

The Joint Sector Programme (Uganda), Training for Real^{vi} project's stakeholders – WASH educationalists, vocational training providers, employers and relevant professional bodies in Uganda – considered education and training quality to mean: the product meets a recognised standard; employers know what to expect when recruiting; and graduates meet the criteria of the employer^{vii}.

The group, including senior members of government, met to discuss lack of planning and strategic direction in WASH capacity building and the predominance of "fire-fighting" and supply-led, short-term training interventions. They agreed that a scatter gun effect was doing little to develop a robust, multi-dimensional specialist workforce, able to support current service delivery or meet new targets in the future.

Some of the challenges were presented by the Uganda Institute of Professional Engineers (UIPE), evidencing an absence of well structured training programs, lack of accreditation for universities, poor continuing professional development options and limited training capabilities in the private sector. The group then heard from the Chartered Institute of Water and Environmental Management, UK (CIWEM)^{viii}, further convincing them that accreditation and association are central to meaningful professional development. The group's discussion concluded that quality higher education can only reasonably be achieved through actions of the institutions themselves; that quality assurance bodies must support institutions in becoming self-reflective; and that staff must to be enabled to undertake honest and critical self-evaluation^{ix}.

Of course there is no simple answer and one result is an unbalanced workforce where some professional areas are not on a par with others in the sector; something those supporting the humanitarian workforce are currently raising^x. However one thing is clear, as WASH agencies – including governments struggle with recruitment and high staff turnover many are realising it is

up to them to insist upon (and be prepared to pay for), education and training that will stand up to rigorous scrutiny; producing 'graduates' of great value and competence that will stay in the organisation longer.

2.4 The disconnect between sector employers and sector education and training institutions

International research by the UK Water, Engineering and Development Centre (WEDC) shows that the water sector in various countries is undergoing institutional change. This change needs to be managed, with attention being paid to the changing needs of the sector's 'demand' for human resources. Educational establishments can 'supply' support with both expertise and training to meet changing circumstances but only if they have the right communication with the employers to understand the needs of the workforce in a changing environment. However, educators in turn need support to respond to the changes in their work – in terms of training material and modes of delivery. Some efforts have been made to establish networks of capacity building organisations, but these have not always proved to be effective or sustainable. However, lessons can be learnt from successful examples, to improve the contribution all stakeholders can make to the goals of the sector^{xi}.

2.4.1 One-off courses for knowledge: observations from the rural water and sanitation sector, Nigeria

In 2001 WEDC worked with UNICEF Nigeria to train 32 senior officers from the rural water supply and sanitation (RWSS) sector^{xii}. The course objectives were typical of such trainings: exposing participants to new thinking and tried and tested practice, techniques and processes; challenging attitudes whilst building upon existing knowledge and experiences; encouraging practical application of learning in the work environment; evaluating and documenting the learning experience. The course structure and delivery was divided into three distinct phases: class based learning in the UK, putting learning into practice in the workplace (Nigeria), and learning and reflection (Nigeria). Prior learning ranged from scant 'on the job' training to those with significant 'hands-on' technical management experience. The course was enthusiastically received by all participants and stimulated critical debate at a time of decentralisation. However, it also raised questions about whether this type of capacity building actually assists to introduce new ideas, or simply frustrates participants.

Participants realised the need for knowledge and peer support post training; however, they soon found themselves reverting to a tendency of being 'closed' to the exploration of new ideas. Very few participants already accessed, or felt motivated to read professional journals, newsletters and research outputs despite the majority having reasonable access to the internet. Learning on the job was not given sufficient recognition and the overall mood was once more 'business as usual'.

The group did suggest the establishment of facilitated 'zone learning groups' to access subordinates and teams to new knowledge, to exchange good ideas about what works best locally and to help staff see capacity development as being more than 'attending a training course'. Despite best intentions these groups did not get off the ground, not least because the majority of senior managers at the time did not see staff development as a priority task within their own job descriptions; rather it was something done by external agencies, such as UNICEF.

During the workplace implementation phase an emphasis was put on incremental improvements and achieving the 'doable'. Encouragingly there was evidence of an ability to make small changes, though the majority of participants realised that they would not be able to implement their best ideas and solutions because institutional barriers were too big to contemplate. This experience is sadly not unique and continues in many joint programmes. However it did provide a moment of learning about the nature, and inherent risks and frustrations encountered as a result of one-off training, especially in complex institutional setting.

2.4.2 Accelerating the do-able

Despite significant investments and gains in recent years, efforts to provide sustainable access to WASH services still have mixed success. A major stumbling block is related to systemic problems that constrain the capacity of WASH institutions – the so-called enabling environment. A number of action based capacity development initiatives^{xiii} – in rural and urban contexts investigated the nature of these constraints whilst assisting a range of government workers in WASH departments and institutions to define what was do-able in difficult circumstances.

Separating job tasks and responsibilities into those that can accelerate progress and those that present barriers, and considering the factors of skills, knowledge, experience, attitude and motivation of individual staff, teams and organisations, certain issues emerged as being universal.

At local government level for example, the regularity of payment of salaries was either an accelerator or barrier to getting work done. However, job security (especially in lower-mid levels of the civil service) and good working relations with colleagues and communities were highly motivational. Barriers largely related to 'lack of's...', some of which were extremely basic: the absence of staff toilets, sanitary disposal facilities for female employees, basic office furniture, paper and light bulbs. At a rights level, employees' negative views about the poor, marginalised groups and women were perceived as major barriers to progress in communities.

Although against the odds in many situations, staff came to realise that individuals and teams could still make a difference, with examples including the establishment of joint account operations, the provision of safe field transport for female staff and the freeing up of staff time to pursue computer literacy. In all cases access to the political landscape was essential, seemingly to make even the smallest change to enabling environments.

2.5 Networks as a model for capacity building and knowledge sharing

Networking has become a widely accepted process in the water and sanitation sector, most recently making use of social networking technologies and platforms. The most notable example in the sector is the ITN set up as part of the IWSSD in the 1980s. Networks can be trainers and researchers supporting each other (e.g. CAPNET) or a forum for trainers (supplying education) having a dialogue with employers (demanding new knowledge and skills). Over 100 anglophone networks, wikis and portals have been identified recently.

There are advantages of networking, such as sharing experiences and knowledge, especially for isolated training providers as some of the skills required are specialised. You might be the only sanitation trainer in a nation and need support from your peers; this can only be found

through an international network. New networks are being established repeatedly to address this perceived need.

However, this approach has not been widely successful and networks fail in agreeing and meeting achievable objectives or sustaining a viable level of collaborative activities to enable them to function. Even successful networks have experienced significant problems, solved usually through the sheer commitment and motivation of network members to the network's objectives and the network itself^{xiv}. There is a cost to maintaining a network over time, both to the members and to any co-ordinating secretariat. Long-term, sustainable funding is needed to keep networks functioning but the benefits are diffuse and sometimes indirect.

Research into the viability of networks dedicated to the dissemination of water and sanitation research outputs and the production of local versions by local partners^{xv} reported a dearth of knowledge on how to develop effective networking practice. Most networks have some monitoring system but are not extensively evaluated, or evaluations are not readily accessible, making lesson learning difficult and the wheel being reinvented repeatedly.

Research findings also identified the challenge of poor communication of actual need between demand-side ('sector employers') and supply-side ('training institutions') stakeholders in developing countries. Demand for skill development and knowledge enhancement, through access to up-to-date knowledge did exist but was poorly voiced, with little opportunity for demand and supply to meet. Trainers often wanted to know what their "customers" wanted but the employers did not have the ability to explain their needs coherently. The training needs expressed by employers did not always match the actual requirements of their organization's strategy.

Learning within networks and by networks continues to attract interest, especially e-based facilities – not least as many WASH programme contracts involve global scatterings of partners and local stakeholders. Nevertheless there is still a role for more traditional ways of communication and interaction within networks; particularly newsletters (e.g. on school sanitation), and meetings and forums which also offer opportunities for informal networking. For such networks to increase the capacity of training staff they need to become better at knowledge acquisition, selection, production and management and critically, in sharing experience and supporting isolated individuals. Information required ranges from accepted best practice to the dissemination of new research findings.

2.6 Strategy and human resource development planning

In Uganda an estimated 17% of the water and sanitation sector's budget for the fiscal year 2003/2004 was earmarked for 'capacity building' – more than that for water for production and water resources management combined. Yet no goals were set. Just as with investments in physical infrastructure, money spent on human resource development should be planned, designed, implemented and evaluated^{xvi}. The Joint Sector Programme, Uganda noted that:

"... capacity building has to be effective and well coordinated. USD 27 million can easily be wasted in training programmes, workshops and seminars of little use and where the bulk of the cost is spent on allowances, food and conference facilities. This is the real challenge; i.e. to provide relevant cost-effective training, eventually resulting in the assumed sustainability

improvements. A certain amount spent on a training programme requires a lot more personnel resources than the same amount being spent on hardware^{xvii}.”

While the situation has shifted with more countries investing at some level, in a more strategic view of capacity – in Ethiopia a stock take of sector capacity building needs and activity to inform an intended Capacity Building Pooled Fund^{xviii}; in India the national pilot to develop participatory district capacity development plans to kick start sector reforms^{xix}; and in Nigeria institutional assessments to agree capacity development plans for rural water and environmental sanitation^{xx} – the overall picture is extremely patchy with the extent of skill and knowledge gaps largely unknown.

Such exercises – themselves capacity building due to their participatory and consultative nature, also reinforce that developing country water and sanitation agency staffing patterns show considerable variation. In addition, the processes are still not clearly understood by which water supply and sanitation personnel are (1) distributed throughout agencies; (2) drawn to private sector /donor /voluntary employment by higher wages/salaries/conditions; (3) replaced as they migrate to other locations in the country or abroad; (4) integrated with indigenous and auxiliary personnel working in the same sector; and (5) brought into the activities of local communities - factors all identified in an early WASH Technical Report, 1988^{xxi}.

Lack of an adequate human resource strategy means that the impact of capacity development cannot be easily measured, so:

- The value of the human resource is underestimated;
- The value for money of training and workshops cannot be adequately assessed;
- The decision to buy in skills or retrain workers cannot be rationally made;
- The correct amount of investment required in Human Resource Development is difficult to quantify; and
- Reporting on capacity development achievements in the context of the sector’s goals is difficult^{xxii}.

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^{iv} WEDC (2009) Technical Proposal for a Water, Sanitation and Hygiene Research Programme Consortium, Section 2.7, unpublished submission to DFID, WEDC, Loughborough University

^v WEDC(2008) technical enquiry for DFID; DFID (2009) Mind the Gap: Human Resources and the MDGs on Water and Sanitation. Briefing sheet, Department for International Development (DFID), UK

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