

OCKELFORD &amp; ROSENBOOM

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**35th WEDC International Conference, Loughborough, UK, 2011****THE FUTURE OF WATER, SANITATION AND HYGIENE:  
INNOVATION, ADAPTATION AND ENGAGEMENT IN A CHANGING WORLD****Development of a rural water supply, sanitation  
and hygiene strategy in the context of decentralisation  
in Cambodia***J. Ockelford & J. W. Rosenboom, UK***REFEREED PAPER 1121**

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*There are number of serious challenges facing the rural water supply, sanitation and hygiene sector in Cambodia, including uncertainties over decentralisation reforms. For the development of a RWSSH Strategy to address these challenges, they were characterised as a “wicked problem” and a process of “mess mapping” was used to understand the challenges from the perspectives of stakeholders from national to commune level. These proved to be a useful conceptual approach and practical process respectively.*

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**Background**

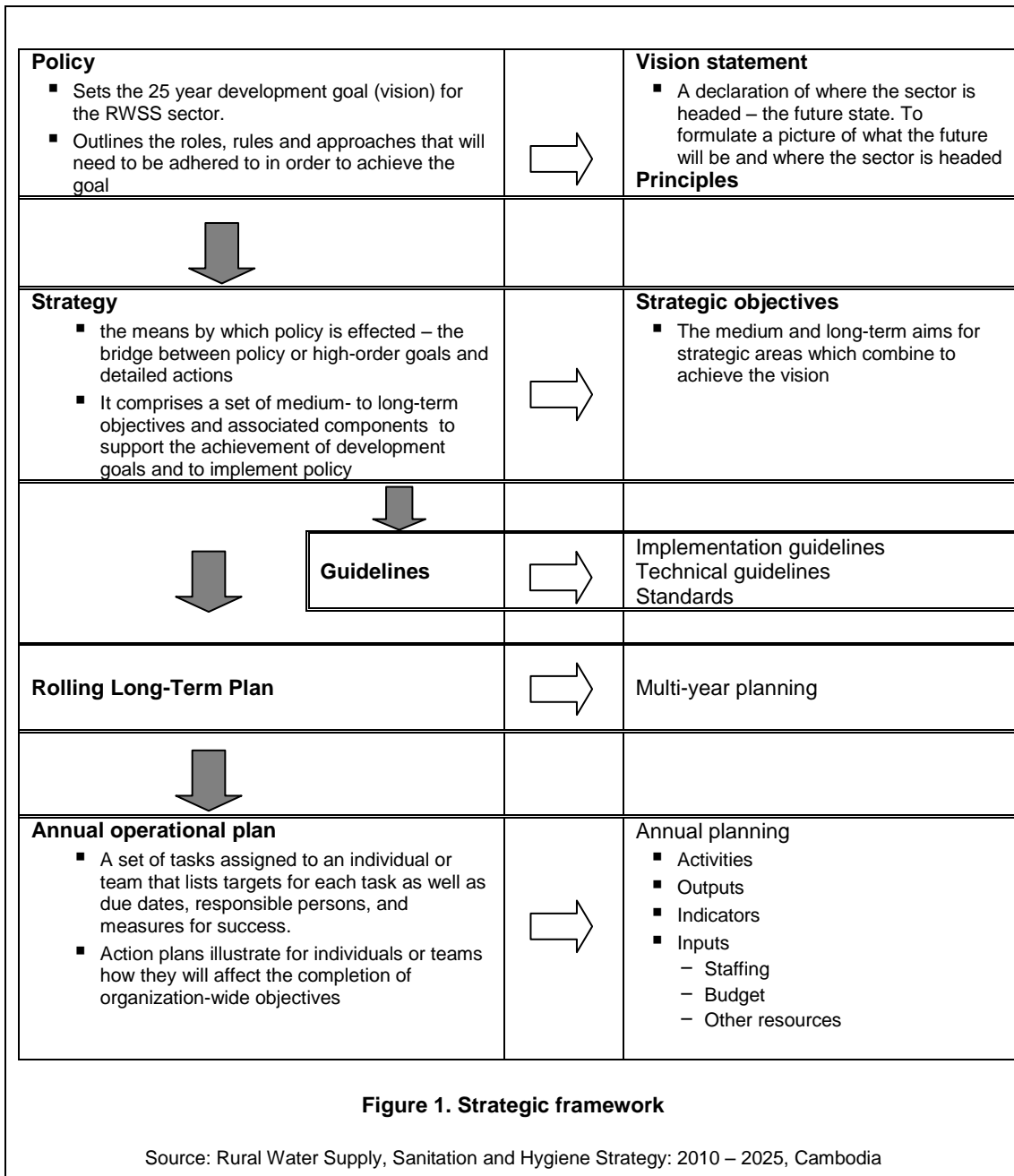
Cambodia has set itself a vision of “Every person in rural communities has sustained access to safe water supply and sanitation services and lives in a hygienic environment by 2025” (RGC, 2003). A national sector review carried out by the lead author in 2005/6 analysed a number of serious challenges facing the rural water supply, sanitation and hygiene sector (Ockelford, 2006). A subsequent study explored the challenges of sanitation in more depth (Robinson, 2007).

One of the recommendations of the Review was to develop a national strategy for the sector. In 2009, the Ministry of Rural Development, designated as responsible for the RWSSH sector, with support from ADB, UNICEF and WSP, commissioned a consultant to help it develop this strategy. The process was guided by a Core Group of these partners.

**Concepts of strategy**

A review of strategies from other sectors in Cambodia and from other countries was carried out together with a review of guidance on strategy development to provide a basis for the development of the Rural Water Supply, Sanitation and Hygiene (RWSSH) Strategy. Some points from this are (Ockelford, 2009):

- Strategy fits between policy and medium term plans – this is shown in the Strategic Framework in Figure 1.
- The Strategy needs to be accessible (in terms of language, content and presentation) to a wide range of stakeholders.
- A summary poster would be a good way to disseminate the strategy – copies could be provided to every provincial and district office in the country, and possibly to commune councils, as well as other stakeholders such as NGOs and private sector.
- Cross-cutting strategic areas could include gender and equity; service delivery; financing; human resources and capacity development; an information system; governance; and research and piloting new technology and approaches.



**Decentralisation and deconcentration**

Cambodia has been and still is undergoing a process of deconcentration and decentralisation (D&D) of government functions to sub-national levels. Elected commune councils, the lowest tier of sub-national government, have been in place for about 10 year, and have received substantial capacity building support over that time. Provincial level administration, the highest tier of sub-national government, has also been in existence for a number of years. The intermediate level, at District, however, was only recently established by law and is very weak. The law has also set in process reform of the provincial administration. At both these level officials and elected councils are still waiting to be told their roles and responsibilities. The Government’s policy on D&D states that all new policies and strategies should conform to the final outcome of D&D (RGC, 2005), but this is not yet clear. The strategy development process described in this paper was strongly related to the ongoing decentralisation and deconcentration (D&D) processes.

## The challenges in the RWSSH

The uncertainty over D&D and the reform to institutional arrangements was one of a number of complex challenges in the Sector. Complexity is caused in part by the different functions that need to be carried out, and the different levels at which they are implemented; from sector planning (national) all the way down to service provision at village level. Others included very low coverage of sanitation (less than 20%), poor sustainability of water supplies, poor water quality, a lack of private sector involvement in service delivery, weak institutional management and leadership and insufficient capacity to achieve the ambitious sector goal of full access to services by 2025. There were also a number of positives, including development and large scale marketing of affordable household water filters, and a strong national sector working group involving most organisations in the sector (Ockelford, 2006).

## Wicked problems and mess mapping

While considering all these challenges during the information gathering process, the consultant realised that the sector had many of the characteristics of a “wicked problem”. Some of the features of these types of problem are (Horn and Weber, 2007):

- No unique “correct” view of the problem;
- Different views of the problem and contradictory solutions;
- Most problems are connected to other problems;
- Data are often uncertain or missing;
- Multiple value conflicts [people’s personal or organisational values];
- Ideological and cultural constraints;
- Political constraints;
- Economic constraints;
- Often a-logical or illogical or multi-valued thinking;
- Numerous possible intervention points;
- Consequences difficult to imagine;
- Considerable uncertainty, ambiguity;
- Great resistance to change; and,
- Problem solver(s) out of contact with the problems and potential solutions.

Almost all these points could be recognised in the rural water supply sanitation and hygiene sector in Cambodia. It was useful to understand some of the characteristics of these complex<sup>1</sup> problems in more detail, to help with the process of resolving the issues in the RWSSH Sector. Conklin (2006) explains these as follows:

1. You don’t understand the problem until you have developed a solution.  
Every solution that is offered exposes new aspects of the problem, requiring further adjustments of the potential solutions. Indeed, there is no definitive statement of ‘The Problem.’ The problem is ill structured, an evolving set of interlocking issues and constraints. Moreover, what ‘the Problem’ is depends on who you ask – different stakeholders have different views about what the problem is and what constitutes an acceptable solution.
2. The special problems have no stopping rule.  
Since there is no definitive ‘The Problem’, there is also no definitive ‘The Solution.’ The problem solving process ends when you run out of resources, such as time, money, or energy, not when some optimal or ‘final and correct’ solution emerges.
3. Solutions to the complex problems are not right or wrong.  
They are simply ‘better,’ ‘worse,’ ‘good enough,’ or ‘not good enough.’ With complex problems, the determination of solution quality is not objective and cannot be derived from following a formula. Solutions are assessed in a social context in which many parties are equally equipped, interested, and/or entitled to judge them, and these judgements are likely to vary widely and depend on the stakeholder’s independent values and goals.
4. Every complex problem is essentially unique and novel.  
There are so many factors and conditions, all embedded in a dynamic social context, that no two complex problems are alike, and the solutions to them will always be custom designed and fitted.

5. Every solution to a complex problem is a ‘one-shot operation.’  
Every attempt has consequences. You cannot learn about the problem without trying solutions, but every solution you try is expensive and has lasting unintended consequences which are likely to create new complex problems.
6. Complex problems have no given alternative solutions.  
There may be no solutions, or there may be a host of potential solutions that are devised, and another host that are never even thought of. Thus, it is a matter of creativity to devise potential solutions, and a matter of judgement to determine which are valid, which should be pursued and implemented.

Another aspect considered was fragmentation. The concept of fragmentation provides a name and an image for a phenomenon that pulls apart something which is potentially whole. Fragmentation suggests a condition in which the people involved see themselves as more separate than united, and in which information and knowledge are chaotic and scattered. The fragmented pieces are, in essence, the perspectives, understandings, and intentions of the collaborators. Fragmentation, for example, is when the stakeholders in a project are all convinced that their version of the problem is correct. Fragmentation can be hidden, as / when stakeholders don’t even realize that there are incompatible tacit assumptions about the problem, and each believes that his or her understandings are complete and shared by all. (Conklin, 2006).

### **The application to strategy development**

A process of “mess mapping” was used to help understand the complexity of the sector. A Mess Map diagram represents a common mental model of the problem that shows the pieces of information and their relationships with other pieces of information (Horn and Weber, 2007). Mess maps were used to present the complexity of the issues and challenges in the sector from the perspectives of the various stakeholders. This was done in a 3½ day “rolling” situational analysis workshop with participants from the commune, district, provincial and national levels. Each day focused on a different level, with the first day for representatives from commune councils, commune council women and children councillors, and district governors from each of the 24 provinces. The second day was for provincial level, with representatives of each Provincial Department of Rural Development and Provincial Local Administration Unit. The third day was for national level, including other line ministries, development partners, private sector and NGOs. The participants on the first two days selected representatives to continue for the subsequent days. This enabled participants from the lower tiers to present their outputs to the provincial and national levels. Altogether about 200 stakeholders participated during the workshop.

The process was the same for each of the first three days: each type of stakeholder identified the challenges facing them in the sector from their own perspective and wrote these on cards. They then grouped the cards and then used wool string to show the linkages between the issues, in effect a map. Participants also proposed strategic actions needed to address the issues. As well as the stakeholder groups, a small team led by the consultant prepared a map of issues identified in various reviews, studies and other reports.

Most of the stakeholder groups focused on three sets of issues, water supply, sanitation and hygiene behaviour – linkages with the institutional challenges were not made sufficiently. This was probably due to two factors. Firstly, the facilitation did not give enough direction or emphasis to this. Secondly, exploring institutional challenges is an uncomfortable process, as it reflects on people’s own organisations’ performance and capacity in the sector.



Photograph 1. Commune councillor presenting the map of commune council women and children

The output of the workshop was a set of maps showing the challenges in the sector from the perspectives of different groups of stakeholders. Some of the groups were particularly creative, as shown in the example of the maps in Figures 2 and 3.

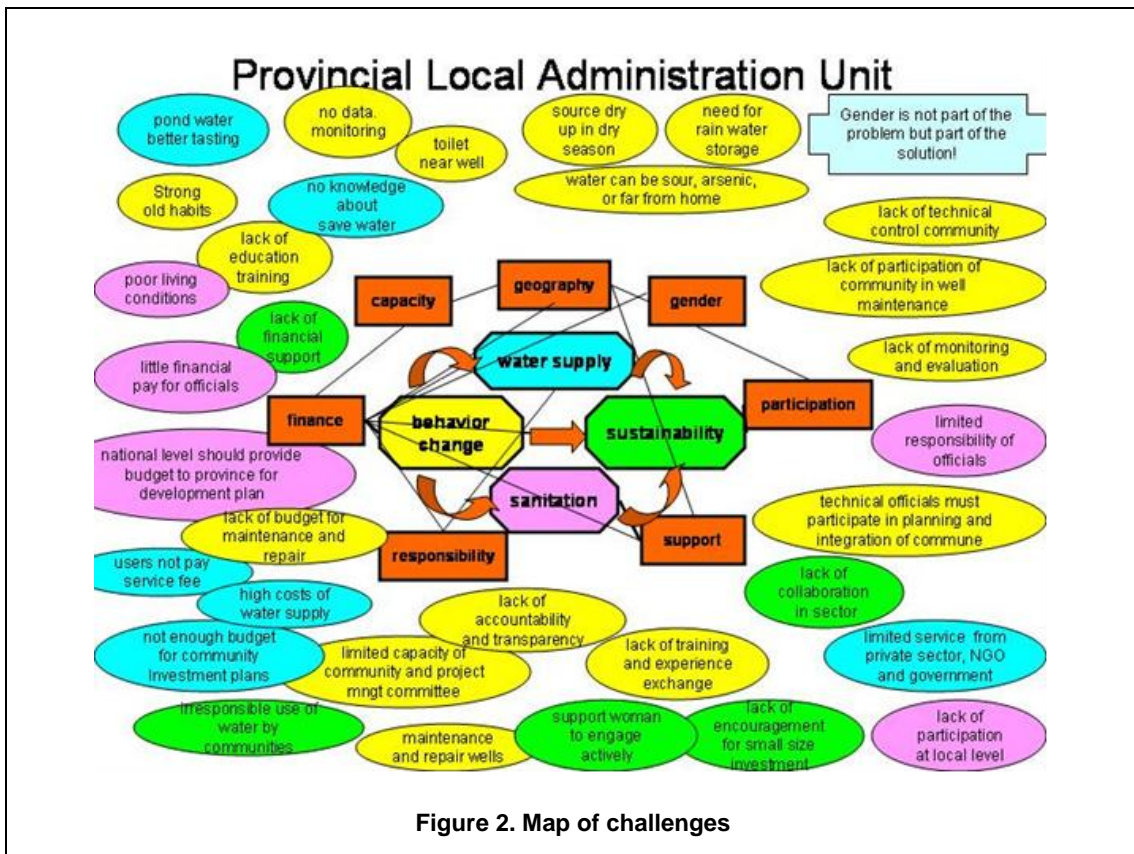


Figure 2. Map of challenges

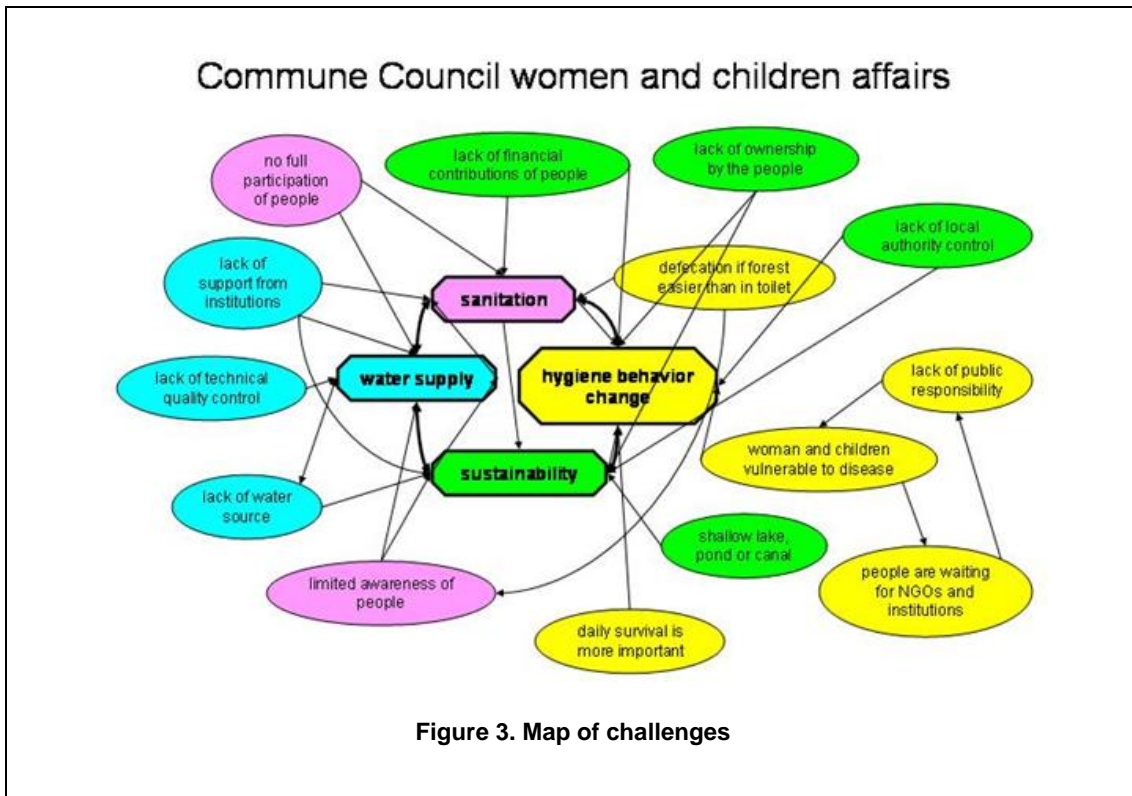


Figure 3. Map of challenges

The final step in the mess mapping process of assembling all the individual maps into one overall map was not taken. There was insufficient time in the workshop and limited benefit subsequently in terms of strategy development. An additional step that was taken was to regroup the issues in the maps under headings of finance, services, technical, geographic, socio-cultural and KAPs (knowledge, attitudes practice), with a set of headings under institutional – sector management, capacity, roles and responsibilities and monitoring.

After the main workshop a number of mini-workshops were held involving selected specialists from government, development partners and NGOs. The first of these was used to synthesise the outputs of the situational analysis workshop. Subsequent workshops focused on key issues, including sanitation financing and water service delivery. These discussions were used for preparing a working draft strategy which was discussed in a further mini-workshop.

A final draft of the Strategy was prepared and presented at a two-day review workshop. Participants on the first day came from the subnational level (district and province) and the second day for national level.

### Key points in the strategy

Key points in the Strategy include (MRD, 2010):

1. The concept of service provision:  
Although the Sector Vision is defined in terms of access to services, the predominant approach in Cambodia has been to develop and implement projects. It is necessary to move away from projects and programmes, which are essentially time-limited activities, to a concept of provision of a particular component or components within an unlimited timeframe of service delivery. Each component in the system needs to be designed and provided taking into consideration all the other components in the system. In this respect the Strategy avoids the use of the word “implementation”. It is associated with projects and implies a one-off activity. Instead, the concept of provision of service is used. [excerpt from the Strategy]
2. Sanitation financing:  
Direct subsidies for sanitation infrastructure will no longer be acceptable. The public finance in the sector will be used to stimulate demand and develop the enabling environment including the availability of sanitation products, so that households pay for their own toilets. Subsidies may be provided but only

to enable the poorest households to obtain toilets through alternative mechanisms, so excluding direct hardware subsidies. [excerpt from the Strategy]

3. Decentralisation with a focus on the district level:  
Given the limited human and financial resources availability, the most appropriate level for managing service delivery under the D&D policy and legislation is the District, with the District Council as the locally accountable body supported by an administration (including technical offices) staffed by civil servants. Each District will be given the capacity and financial resources to serve the Commune Councils within its geographic area. Initially MRD will establish a District RWSSH Unit within the District Office of Rural Development. [excerpt from the Strategy]
4. Delivery of services by the private sector  
The Strategy is premised on the private sector taking a major role in providing services to rural communities and individual households. The services range from short-term provision of infrastructure to long-term and indefinite operation of water supplies and support services. There are three parts to support to develop the private sector:
  - Creation of a competitive environment, including transparency and competition, with contractual relations between water and sanitation user groups, service providers, and local authorities
  - Access to capital investment and loans
  - Development of business and technical skills
 [excerpt from the Strategy]

The Strategy is currently being translated into Khmer, which will then be the definitive version. Two other versions are also being produced: a short version with the main objectives and summary of strategic actions; and a poster presenting the key components. It is intended that this poster would be put on the walls of all the offices involved at sub-national level, down to commune councils.

## Conclusion and lessons

1. The process of developing a strategy is critically important. The concept of wicked problems was helpful in recognising complexity of the range of challenges. It was also a useful reminder at times that the strategy could not be perfect and solve all the problems.
2. The use of mess mapping was helpful in allowing people from different levels to express their challenges in their own way. Perhaps more importantly, it emphasised to stakeholders that there are different perceptions of the challenges, and that they are all valid.
3. With a context of decentralisation it is also important to engage representation from the stakeholders at sub-national level in developing a strategy, as they will be responsible for much of the delivery of the strategy. The workshop was a very successful way to represent a large cross-section of stakeholders in a limited period of time.
4. The partnership of donors was strong and essential, and ultimately a good example of how this can be done.
5. In the workshop, the process of institutional analysis is one of “wanting to do it” for its obvious benefits, coupled with being terrified about having to be honest about institutional weaknesses. An overall lesson from the whole process is the fact that we may have given insufficient attention to the idea of creating a “safe space” for discussion of weaknesses (assuming that there would be a way to do that).

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**Notes**

<sup>1</sup> The term “complex” was used as an alternative to “wicked” as being more culturally acceptable.

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