**Adapting ERU water supply modules to better respond to**

**large scale emergencies of various contexts**

*Background*

In 2007 the Water and Sanitation Emergency Response Unit (ERU) Modules were reconfigured and renamed. Two modules, Module 15 (M15) and Module 40 (M40), were primarily designed to provide water supply and the third module, Mass Sanitation Module 20 (MSM20), primarily focussed on sanitation. Although the size and capability of the ERU human resource pool has increased, no significant changes have since been made to the scope or equipment lists of the water supply modules.

Amidst concerns about the declining use of water supply modules, the WatSan ERU Technical Working Group (TWG) has discussed improving the flexibility of those modules. The National Societies which hold water supply modules and the Federation agreed:

“NSs with M15 and M40 to explore broadening the capacity to respond to emergency water supply needs in various contexts including joint deployments (between both modules and ERUs), scattered populations, urban settings.  This requires more attention for defining roles and responsibilities.  Concept to be tested in a large scale, scattered context as a modified M15 deployment (i.e. HR only or reduced or modified equipment).”

*Challenges faced by Water Supply Modules*

The M40 is a large unit and most National Societies which hold this module acknowledge that, while it is rarely deployed, the equipment is not difficult to store and that it remains necessary that the Movement maintain this capacity. In contrast, the M15 was once the most frequently deployed WatSan ERU module. This began to change around 2009. Only a few full deployments of an ERU water supply module has occurred since January 2010 (e.g. Philippines 2013).  The MSM 20 was referred to as “the rising star” in the 2009 WatSan ERU Technical Working Group (TWG) and, in contrast to the water modules, has been deployed numerous times since (on average more than once a year). More important than the equipment, M15 trained personnel have fewer opportunities to deploy. This reduces the readiness and morale of the M15 and M40 ERU pool.

The M15 was originally designed to supply high quality water to Health ERUs and were thus deployed almost every time a Health module was. Health ERU modules are now ‘stand alone’ in terms of water and sanitation and no longer automatically trigger an M15 deployment. Furthermore, in some ways, the M15 is a victim of its own success. Some of the decrease in M15 deployments can be explained by improved efforts to use the ERU as a capacity building tool. ERU equipment is handed over to host National Societies after deployment and, particularly after a 2008 review highlighted numerous failed efforts to build capacity after handover, the number of National Societies which use handed over ERU equipment in emergency response has greatly increased (e.g. Pakistan, Philippines, Dominican Republic. This is accompanied by increased number and capacity of National and Regional Disaster Response Teams (NDRT/ RDRT) and the prepositioned WatSan equipment available to them.

Yet there have been a large number of operations of sufficient scale coupled with a gap in local capacity to address those needs that merits deployment of ERU water supply modules. It is primarily the nature of those large scale disasters that have prevented the use of ERUs. As has been discussed at recent WatSan ERU TWG meetings, the water supply modules in their current configuration are not appropriate for a wide range of contexts.  The modules are capable of producing a great deal of safe water. Distributing that water is another matter. The M15 was made more modular and can in theory set up in 3-5 locations. However, the ERU water supply modules work best when populations are concentrated in a single location. Operations involving large dispersed populations, including floods and disease outbreaks in rural areas, are particularly challenging for the M15 and M40.

The ERU water supply modules are still powerful tools for emergency response. They play to the strength of the Red Cross Movement, its people, by allowing a broad spectrum of human resources to be trained for deployment. The problem is that the ERUs could do so much more. The water supply modules have evolved substantially since their first development in the mid 1990’s. What is lacking is new configurations for deploying that capacity rapidly.

*Why New Configurations?*

Being able to deploy the water supply modules in new configurations would improve our response and increase their options for deployment.  Adding new configurations would maintain existing capacity while increasing the flexibility and overall suitability of the modules.

New configurations would ensure that equipment deployments are more tailored for the context while still utilizing the ERU approach of standardized equipment packages. The majority of the items for the proposed configurations (see below) are already stocked by ERU holding National Societies and procurement of additional items is expected to be relatively small. However, additional training for the new configurations is likely to be necessary. Joint trainings between National Societies would reduce costs and foster collaboration. Nevertheless, the capacity of the ERU pools is high and creating new configurations is less about additional training than changing the equipment we send. In many cases it is expected that the new configurations would be lighter, this reducing the cost barrier to deployment.

Recent ERU deployments have seen additional involvement of NDRT and RDRT. No longer merely working in the same operation, NDRT and RDRT are increasing embedded in ERU WatSan modules. The IFRC and its member National Societies have dedicated a substantial amount of resources to increasing the capacity of NDRT and RDRT. This includes training and the establishment of the WatSan Disaster Response Kits. More human resources and prepositioned equipment packages are now available in more places. However, the WatSan Kits are designed for smaller operations. They can augment an ERU response but not fully replace them. On the other hand, while ERU pools remain strong, recent large scale disasters (Haiti Earthquake, Ebola) have clearly demonstrated that ERU deploying National Societies cannot rely on their rosters exclusively. Expanded configurations would ease the integration of NDRT and RDRT into ERU teams and facilitate use of the WatSan Kits, thus creating truly global tools.

We are not operating in a vacuum. Due to the challenges mentioned above, as well as increased competition from other humanitarian agencies, there is less operational space for the Red Cross in emergency operations than ever before. We increasingly find ourselves arriving later than other agencies and struggling to catch up. Furthermore, as we rely on deployment of standardized equipment packages, ERUs are inherently less flexible than bespoke emergency response operations launched by NGOs. However, the use of standardized equipment packages allows us to train and deploy a far wider pool of human resources quickly. This is our ERU system’s greatest strength and it would be foolish to abandon it and build each response from scratch. Working within the ERU framework by adding new configurations within existing modules will greatly increase our speed and flexibility without the need for starting over.

*The Way Forward*

We propose that the M15 and M40 each be made available in three configurations, with the possibility of a fourth configuration to be discussed further. The capacity of each configuration would be maintained (i.e. an M15 would be capable of serving 15,000 people in any configuration). Note that the below equipment descriptions refer only to the items pertaining to water and sanitation activities. This does not include vehicles or personal equipment. Decisions to deploy support equipment are made based on the context.

Configuration A – This would be the standard configuration using the current equipment lists.

[M15 Configuration A Equipment List](http://procurement.ifrc.org/catalogue/detail.aspx?volume=1&groupcode=114&familycode=114012&categorycode=MM15&productcode=UWATMM15COMP)

[M40 Configuration A Equipment List](http://procurement.ifrc.org/catalogue/detail.aspx?volume=1&groupcode=114&familycode=114012&categorycode=MM40&productcode=UWATMM40COMP)

Configuration B – This would be a lighter configuration with the capacity to provide water treatment at the household level. This would require the following human resource profiles:

|  |  |
| --- | --- |
| **Role** | **Number** |
| **M15** | **M40** |
| Team Leader | 1 | 1 |
| Hygiene Promotion | 1 | 2 |
| Water Quality Testing Specialist | 1 | 2 |
| Specialist Support (logistics, admin, etc) – Optional | 1 | 1 |

This is the full equipment list, NOT in addition to the Configuration A list.

|  |  |  |
| --- | --- | --- |
| **Code** | **Item** | **Number** |
| **M15** | **M40** |
| HCONBUCKP14L | BUCKET, plastic, 14L with clip cover and 50mm outlet |  |  |
| HCONJCANPF10 | JERRYCAN, foldable,10L, food grade plastic,screw cap |  |  |
| 'HHYGSOAP100G | Soap |  |  |
| WASDCHLA0040T | CHLORINE, 40mg (NaDCC 67mg), for 10L water, 1 tablet |  |  |
| WASDVASD0010 | WATER PURIFICATION AGENT, for 10L of water |  |  |
| WMEAPOOL10 | POOL TESTER + accessories |  |  |
| WMEAPOOL10A | (pool test) TABLET DPD1 for dosing free chlorine |  |  |
| WMEAPOOL10B | (pool test) TABLET DPD3 for dosing total chlorine |  |  |
| WMEAPOOL10C | (pool test) TABLET RED PHENOL for PH control |  |  |
| WMEAPHPA0014 | SET OF pH STRIPS, 100 strips, 0 to 14 |  |  |
| KSANHYGP01A | HYGIENE PROMOTION BOX A, promotion items |  |  |
|  | Fairey Ceramic Filter\* |  |  |
| KWATWLAB02 | KIT, WATER LAB TEST, bacter., + acc., Delagua Single incu. |  |  |

 \* Note that the amount of household water treatment chemicals and filters would need to be discussed further. One possibility is that Configuration B would bring a small amount of “starter” supplies and have the capacity to run a large operation with additional supplies requested on the mobilization table after the team has conducted a beneficiary assessment.

Configuration C – This would be a lighter configuration with the capacity to restore water supply from handpumps or other systems and carry out community mobilization work to improve the sustainability of that infrastructure. This would require the following human resource profiles:

|  |  |
| --- | --- |
| **Role** | **Number** |
| **M15** | **M40** |
| Team Leader | 1 | 1 |
| Hygiene Promotion | 1 | 2 |
| Water Infrastructure Repair Specialist | 1 | 2 |
| Water Quality Testing Specialist | 1 | 1 |
| Specialist Support (logistics, admin, etc) – Optional | 1 | 1 |

This is the full equipment list for Configuration C, NOT in addition to the Configuration A or B lists.

|  |  |  |
| --- | --- | --- |
| **Code** | **Item** | **Number** |
| **M15** | **M40** |
|  | Pipe Wrench |  |  |
|  | Fishing tools |  |  |
|  | Pipe Clamps |  |  |
|  | Pipe Vise Clamp |  |  |
|  | Tool Kit |  |  |
| WASDCHLA0040T | CHLORINE, 40mg (NaDCC 67mg), for 10L water, 1 tablet |  |  |
| WASDVASD0010 | WATER PURIFICATION AGENT, for 10L of water |  |  |
| WMEAPOOL10 | POOL TESTER + accessories |  |  |
| WMEAPOOL10A | (pool test) TABLET DPD1 for dosing free chlorine |  |  |
| WMEAPOOL10B | (pool test) TABLET DPD3 for dosing total chlorine |  |  |
| WMEAPOOL10C | (pool test) TABLET RED PHENOL for PH control |  |  |
| WMEAPHPA0014 | SET OF pH STRIPS, 100 strips, 0 to 14 |  |  |
| KSANHYGP01A | HYGIENE PROMOTION BOX A, promotion items |  |  |
|  | Fairey Ceramic Filter |  |  |
| KWATWLAB02 | KIT, WATER LAB TEST, bacter., + acc., Delagua Single incu. |  |  |

Another configuration for urban water supply may also be a useful initiative. Further discussion within the ERU TWG is merited on this topic.