

15 years behind WASH? Unresolved issues in the shelter sector and the 'deep craft' nature of shelter and housing technology

3rd April 2014

This is a summary of the UKSF discussion facilitated by Richard Luff, Kate Crawford and Victoria Maynard on 13th March 2014.

Participants were split into three groups to discuss what we thought we knew or did not know about building back safer after disasters and whether there were perhaps areas for further enquiry.

Participants were assigned to groups by the facilitators in order to combine experienced people, familiar with other participants or comfortable addressing the group with newcomers to UKSF or 'outsiders' with a different perspective.

Each discussion was based on a provocative hypothesis and the facilitators were supported by a group leader - to chair the discussion - and a note taker. Each facilitator wrote up their own session. Appendix 1 has some additional background notes for group leaders on theories of change and Sphere.

Group Hypothesis 1; how does build back safer occur Richard Luff

Shelter actors provide cash, material, IEC and training inputs in the belief that families/ communities can build back safer but most families – the “non-intervened” people - still build back worse.

Rebuilding back safer is more complex and there needs to be a much better understanding of the enablers and blockers if shelter actors can really get the depth and breadth of change sought. WASH actors used to provide inputs for toilet/latrine provision and expected these to be used, but the evidence mounted up to show that inputs don't necessarily lead to the desired outcome. It was only when the socially transformative process of CLTS was developed that toilet take up started to occur at scale.

Group work outputs

These were the discussion points that relate to factors that need to be taken into account when trying to facilitate build back safer at scale.

- Prescriptive examples of building designs are invariably too expensive to build.
- There needs to be Govt permission/ direction/policy and support for the idea.
- Perceptions and desire for modernity and social status need to be taken into account.
- The idea of building back safer needs to be sold better, so beyond IEC materials.
- More emphasis on behaviour change.
- IEC materials and designs people are trained to build need to take account of cultural expectations in house design.
- People need to be empowered through choices.
- Householders may have other priorities that are greater than building back safer.
- It is simply too aspirational to do mass coverage and build back safer.
- The provision of the package of inputs as defined by the shelter cluster in the Philippines do possibly/hopefully lead to houses being build back “a bit” safer. However we can't easily measure or prove this.
- Do we really understand incentives (enablers) and blockers?

Where is deeper enquiry needed?

- Let communities ID their own risk (which is of course what PASSA seeks to do).
- A longer time frame is required to enable building back safer to occur. This might need local partner org capacity building.

RL commentary on group discussions

- Housing recovery in humanitarian programmes, often under an early recovery heading, is predominantly programming with external inputs, materials, cash, IEC materials and training and remains and very light on social considerations and behaviour change analysis.
- The group clearly felt that we would like the world to be a place in which houses were built back safer. However it was perhaps considered on balance that it may not be feasible within humanitarian (recovery) programme times frames and resources.
- Having stating build back safer as a *possible but not assured* outcome might be appropriate, in other words supporting self recovery might lead to people building back a bit safer, but there again it might not. It is secondary to the purpose of getting the means to rebuild into households hands.
- There were different views on whether we do have an understanding of key factors and inputs or not that might lead to build back safer. However there were a lot of factors beyond the typical inputs (see above) listed by the group about what might influence whether people build back safer or not. This suggests that while there is some greater

understanding about the change process that shelter actors may articulate in their proposals; it is speculative based on experience and without a body of evidence to back this up. However these ideas set down are useful to build upon to develop a deeper understanding about how building back safer might be taken forward at scale. It is suggested that deeper understanding of change needs to be developed and backed up by evidence.

- A transformational process for shelter, equivalent to CLTS remains very hard for anyone to even imagine, let alone understand how to develop and it may not exist at all. It should be remembered that CLTS lives in the development WASH domain and not within humanitarian recovery/DRR budget lines and programming. However it is note worthy that the WASH cluster/UNICEF were introducing CLTS in the Philippines recovery programming.

Extract from Philippines cyclone Yolanda SRP

This is included to show what the SRP said about build back safer. The plan uses words such as durable, progressive and working with Govt on build back safer. It stops short of naming any explicit claims about householder’s actually building back safer, though this is perhaps expected/ suggested. It would be useful to examine individual agency proposals to understand if they articulate a vision of household’s actually building back safer.

The Philippines

STRATEGIC RESPONSE PLAN

Cluster objective 2:

Shelter Cluster partners will provide support for household self-recovery through incremental housing solutions using consultative, participatory processes.

Outcome-level indicators and targets

Number of households that sustained house damage from the typhoon that are currently living in safe, habitable dwellings resulting from assistance from humanitarian partners (500,000)

% of households that are satisfied with the recovery solutions and assistance that they received from humanitarian agencies (80%)

Top-priority activities:

Activity	Locations	Indicator	Target
Households are provided durable construction materials and tools to contribute to rebuilding or repair to damaged houses	Regions VI, VII and VIII	Number of households that have been provided a durable roof solution	500,000
		Number of supplementary hardware interventions that contribute to durable housing, including tools, wall and structural materials	TBD through assessments
Cash distributions (with monitoring) that are intended to enable households to purchase construction materials or labour that will contribute to progressive sheltering, monitoring disaggregated by usage type	Regions VI, VII and VIII	# HH who have been provided a cash disbursement of 10,000 PHP or more	TBD through assessments

All other:

Activity	Locations	Indicator	Target
Technical assistance on safer building practice delivered at community level	Regions VI, VII and VIII	# of awareness raising and outreach campaigns	TBD
Supporting government with technical assistance on housing, planning and policy on better/safer building approaches.	Regions VI, VII and VIII	# of government departments/units supported	3
		# of service types provided	3
Monitoring to track outcomes of shelter programming including household and gender/vulnerability disaggregated satisfaction, restoration of livelihoods, access to schools, water/sanitation, family health, etc	Regions VI, VII and VIII	# of monitoring processes during the next year	3

Group Hypothesis 2; Design standards Victoria Maynard

Shelter actors do not have standards that guide design and construction of houses to a resilience specification.

Shelter standards in SPHERE deal with space and social considerations – referring to what is “acceptable”, “appropriate” and “existing” – but don’t deal explicitly with hazard resilience which leaves agencies ill-equipped to deal with this when they deal with the move to recovery and housing.

Group work outputs

Phase 1 – critiquing the question

1. The initial reaction of the group was ‘we do have standards’ (Mario) such as building codes and material standards in each country (although these vary in quality) and the Sphere standards (Graham). It was argued strongly that the gap lies in applying the codes and standards we already have, rather than creating new ones. Also that the Sphere standards were designed to be proscriptive rather than prescriptive, on the understanding that they must be applied to a specific context. (Graham)
2. Other group members pointed out that affected people couldn’t meet building codes prior to the disaster (that’s why it happened), that standards didn’t cover non-engineered/vernacular construction, and that ‘appropriate’ standards would need endless variations as each family has different requirements. (Jamie) Therefore explicit resilience standards are not required because they can’t be meaningful across all these different contexts and won’t help us improve our work.
3. There was general agreement that expertise was more important than standards. That we need ‘the right people for the right job’ and that standard job specifications or required budget allocations for technical expertise in proposals would be more useful than specifications. (Julien/Graham/others)

Phase 2 – ‘if we did agree with the question – what standards would be helpful?’

- A. Standards are useful if they help us improve our response (for example 15litres/day).
- B. If we don’t even have standards for schools (which are more standardised), how can we have them for housing?
- C. What is permanent? When to apply the standards?
- D. A standard method of reviewing existing building codes and standards in each country would help us in identifying gaps.
- E. Who is responsible? The government are responsible for developing and implementing building codes, but it takes time for the government to define standards after a disaster, and if we build back we are responsible. Greater clarity on the definition and allocation of risks and responsibilities would be helpful.
- F. Perhaps it would be possible to define standards which do apply across contexts. For example transitional shelter could resist a 1 in 100 year event (defined in terms of local hazards) while permanent housing could resist a 1 in 500 year event. To put it another way ‘better’ could be defined in terms of performance levels such as ‘life safety’ being adequate during recovery and ‘building safety’ for permanent reconstruction. To define standards in this way we would need to define the design life of the structure.
- G. Or perhaps we could be more realistic and define ‘not safe, but safer’. For example ‘better’ could be defined in terms of the pre-disaster context – i.e. existing + 10%. This allows for the development of appropriate standards for people with different pre-disaster levels of risk and capacity. We should recognise that the standard is the aspiration, but that people take incremental steps to get there.
- H. This is not the generation of new standards, but better describing the brief.

VM Commentary on group discussion

- 2/3 of the session was spent critiquing the question and 1/3 engaging with it - alternative facilitation methods might help.
- Perhaps 'unpacking the black box of shelter' is a better description than 'deep craft' because otherwise the discussion tends to be about expertise rather than standards
- How different is CLTS from PASSA? Participants tended to assume CLTS and PASSA were equivalent.
- It was more helpful to talk about 'better defining the brief' than use the term 'standards'
- A next step might be to review different solutions against a standard benchmark of 1 in 100 year event (or something like that) AND (if possible) against the existing level of risk in pre-disaster housing. In Transitional Shelter: Eight Designs Arup reviewed the designs against local building standards. There was a lot of discussion about this at the time and it might be worth discussing it with the project manager.

Group 3 hypothesis: Designing options that meet the standards (re questions 4, 5 and 6) Kate Crawford

Since shelter and settlement actors don't have resilience standards, it is difficult to understand the consequence of trade-offs and develop a menu of equivalent shelter/housing options.

In turn this does not allow an exploration of other e.g. traditional designs, take into account material availability or allow a detailed understanding of critical design and build weaknesses. If a resilience standard was set, families, private sector and agencies could work their designs to meet the specification, rather than a single specification set to meet a standard which has not been defined.

Group work outputs

Phase 1 – critiquing the question

1. Participants questioned the opening statement and added additional terms/edits to reflect their views: 'A menu of **broad categories of shelter design options – criteria or ranked and weighted criteria** - that consider trade-offs can be better developed if specifications exist
2. There was also a discussion around 'menu for what' - what was the objective of setting a menu and to whose advantage? By opening the session with a discussion about "menus" - it was possible to raise
 - o technical issues: what stuff is in the bundle and how flexible and customisable is that stuff?
 - o social issues: what is appropriate? what are the decision and design processes? what are the criteria for defining the stuff?
 - o political issues: some participants said that developing a menu of technical options was not the problem (although the sector could be slow to do this) and that it was often the politically expedient technical approach. The (first order) problem seemed to be ensuring that the options were appropriate to the context and the (second order) problem was checking that an "options" approach was in fact valuable.
3. How could a better design process, based on specifications, be developed in order to identify a range of shelter options?

Phase 2 - developing a list of areas of enquiry

Areas of Enquiry: Trade-offs between “equivalent” shelter options

A. Scale: What difference to trade-offs does scale make:

- Time scale: quicker to have one option?
- Numbers of units: easier to standardise?
- Consultation: can it be done?

B. Context: What difference to trade-offs does context make? (Are we able to explain the process of how we read the context and use it in our design or technical discussions?)

C. Risk: Are we able – as a sector – to do multi-criteria risk analysis? Are we able to distinguish and explain trade-offs:

- At a strategic level (if we do this 100,000 people will receive something but if we do this only 10 people will receive something; or if we do this 100,000 people will receive something within a week, if we do this nobody will receive anything for 10 weeks)
- At a shelter unit level (this sort of roof is ok if we also do this, this and this; doing this, this and this is equivalent to this; we can lower the “standard for dignity” if we make sure it is cheap and durable)

D. Decisions and learning: do we understand our own decision processes about trade-offs in terms of:

- Scale?
- Customization?
- Documenting what we are trading off and why?
- Use our decision processes as well as the final decision for learning?
- Does the current system of meeting notes and decision-trackers help or hinder? (Do we do any analysis of this stuff?)

E. Design and Choice: do we understand what our design choices are?

- Can we explain them?
- Do we know their consequences?
- Who makes the choices?
- Is there a way of making a “performance specification” – an end objective – with many design/choice combinations that might achieve the same objective?
- Is there a way of ranking or weighting design criteria? Does this evolve or change over time? Are we doing this but just not explaining that this is what we are doing?

F. Data: baseline from before, during, a little bit and long after the intervention?

KC Commentary on group discussions

1. The group immediately wanted to understand why they had been put together: we explained that we wanted to combine alpha/experienced people with newcomers/outsideers; people comfortable with this sort of question and people not comfortable.
2. As in other groups, after a short time the group reflex was:

- to explain the current approach as something that was fit for purpose and that dealt with the need to decide and act quickly at scale (by developing coarse categories of people and their needs) and
 - to ask whether what we were discussing added anything new or challenged the current approach
3. It also seems that debates in the sector can be quickly polarised or closed down especially around the need to engage with the community Vs act quickly and decisively and the need to respond to the context. It is only when the questions are developed more that the nuance comes out particularly how much we are struggling as a sector with:
- what is it about the context that is important or needs to be known early and how do we find this out in ways that run before the event or prior to/instead of/in parallel to community consultation after the event;
 - how does the humanitarian shelter sector - and the other people in the room making decisions - use this "context" to make or change early decisions?
4. By the end of the session, there did seem to be some acceptance that our design criteria and our design/decision processes were not defined/recorded well enough to understand/learn from/explain to others things like the "compliance", equivalence or consequences of different shelter bundles.
5. We summed up by suggesting that this was not unique to the humanitarian sector and that other sectors - eg climate change policy - struggle with decision processes on complex issues with uncertain future scenarios.

Appendix 1: Background Text for Group Leaders and Note Takers

Group 1: how does build back safer occur?

[What is Theory of Change?](#)

As we define it, a Theory of Change defines all building blocks required to bring about a given long-term goal. This set of connected building blocks—interchangeably referred to as outcomes, results, accomplishments, or preconditions is depicted on a map known as a pathway of change/change framework, which is a graphic representation of the change process.

Built around the pathway of change, a Theory of Change describes the types of interventions (a single program or a comprehensive community initiative) that bring about the outcomes depicted in the pathway of a change map. Each outcome in the pathway of change is tied to an intervention, revealing the often complex web of activity that is required to bring about change.

A Theory of Change would not be complete without an articulation of the assumptions that stakeholders use to explain the change process represented by the change framework. Assumptions explain both the connections between early, intermediate and long term outcomes and the expectations about how and why proposed interventions will bring them about. Often, assumptions are supported by research, strengthening the case to be made about the plausibility of theory and the likelihood that stated goals will be accomplished.

Stakeholders value theories of change as part of program planning and evaluation because they create a commonly understood vision of the long-term goals, how they will be reached, and what will be used to measure progress along the way.

A Theory of Change is a specific and measurable description of a social change initiative that forms the basis for strategic planning, on-going decision-making and evaluation. The methodology used to create a Theory of Change is also usually referred to a Theory of Change, or the Theory of Change approach or method. So, when you hear or say “Theory of Change”, you may mean either the process or the result

Group 2: Design standards

What does Sphere say about hazards?

Rights to adequate housing:

“sufficient space and protection from cold, damp, heat, rain, wind or other threats to health, including structural hazards and disease vectors”

Standard 1 Strategic Planning

Ensure dwellings or settlements are located at a safe distance from any actual or potential threats and that risks from existing hazards are minimised (see guidance note 7).

Guidance Note 7: Risks posed by natural hazards such as earthquakes, volcanic activity, landslides, flooding or high winds should inform the planning of shelter and settlement solutions.

Standard 4 Construction

- **Guidance Note 4.** Disaster prevention and risk reduction: Construction resilience should be consistent with known climatic conditions and natural hazards and should consider adaptations to address the local impact of climate change. Changes to building standards or building practices as a result of the disaster should be applied in consultation with the disaster-affected population and the relevant authorities.
- **Guidance Note 5.** Safe public building design and construction: Temporary and permanent public buildings such as schools and healthcare facilities should be constructed or repaired to be disaster-resilient and to ensure safety and access for all. Such facilities should comply with sector-specific construction standards and approval procedures, including accessibility requirements for those with mobility, visual or communication difficulties. The repair or construction of such buildings should be undertaken in consultation with the appropriate authorities and informed by an agreed service infrastructure and affordable maintenance strategy.
- **Guidance Note 6.** Construction standards: Standards and guidelines on construction should be agreed with the relevant authorities to ensure that key safety and performance requirements are met. Where applicable local or national building codes have not been customarily adhered to or enforced, incremental compliance should be agreed, reflecting local housing culture, climatic conditions, resources, building and maintenance capacities, accessibility and affordability.

There are invariably no building standards followed which deal with mitigating the effects of natural hazards that are applied in rural areas and for informal settlements in particular. The WASH sector uses indicators (levels of water quality/quantity, an

absence of open defecation, levels of diarrheal incidence etc) to define thresholds or standards in order to ensure public health risks are kept to an acceptable level, i.e. safety is ensured.

Additional questions: how much “diagnosis” of construction and common defects is needed to identify indicators? Are these indicators always the same in any housing or disaster context (ie only the thresholds change)?

Group 3: Designing options that meet the standards

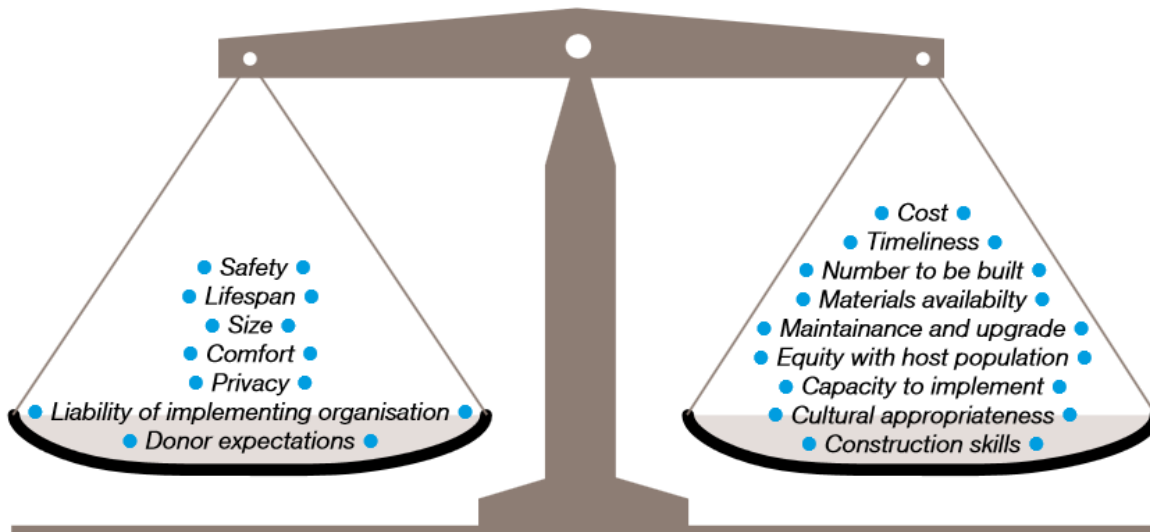
What does Sphere say about risks?

Sphere Shelter and Settlement Assessment Checklist

Risks

- What is the immediate risk to life of the lack of adequate shelter, and how many people are at risk?
- What are the potential further risks to lives, health and security of the affected population as a result of the ongoing effects of the disaster or other known hazards on the provision of shelter?
- What are the particular risks for vulnerable people, including women, children, unaccompanied minors, persons with disabilities or chronic illnesses, due to the lack of adequate shelter and why?
- What is the impact on any host populations of the presence of displaced populations?
- What are the potential risks for conflict or discrimination among or between groups within the affected population?

An example of trade-offs (Ashmore & Treherne, 2011)



A successful transitional shelter design must balance many factors. Design solutions are often specific to the context, and as a result no single design is suitable for all responses.