



HUMANITARIAN INNOVATION FUND

Final Report

Organisation Name	Arup & Partners
Project Title	Surface Water Management in Humanitarian Contexts
Partner(s)	CIRIA, Oxfam, WEDC, Sue Illman and EPG
Problem Addressed / Thematic Focus	Knowledge Access Challenge – Surface Water Management
Location	UK
Start Date	1 st July 2017
End Date	27 th October 2017
Total Funding	Total HIF and other contributions to this project
Total Spent	£30,108

Reporting Period	1 st July – 27 th October 2017
Type of Innovation	A scoping study (a literature review and stakeholder engagement) to feed into a proposal for robust guidance to inform practitioners about surface water management and allow them to efficiently develop appropriate, cost-effective surface water management solutions in humanitarian contexts.
Project Impact Summary	<ul style="list-style-type: none">• Inform and raise awareness about the importance of the appropriate management of surface water on-site• Support practitioners to better understand surface water management and its constraints and opportunities• Enable practitioners to select and design/retrofit suitable drainage solutions for sites around the world (including the use of sustainable drainage systems)



PROJECT ACTIVITIES AND OUTPUTS

Please go to **Appendix 1** and attach the final workplan, showing all work that was actually completed.

1. With reference to the final workplan, what have been the key achievements of the project?

We have successfully undertaken Phase 1, i.e. the production of a scoping report, which is part of a two-phased approach to developing a surface water guidance document for use by practitioners within humanitarian contexts. This phase has involved a number of key activities, including:

- A literature review of the available guidance related to surface water management within the humanitarian and more traditional drainage design contexts, including the collation of a number of case studies;
- Stakeholder engagement through a series of activities, including online surveys, two workshops, structured interviews with humanitarians and a presentation at the Shelter Meeting 17; and
- Production of the proposals for Phase 2, i.e. guidance development, and an outline scope of works.

A key achievement is the positive engagement from humanitarian organisations, which has been both informative and encouraging in terms of the feedback obtained. This process has helped us to understand their needs when working and looking to address surface water management issues within the field and has enabled to us to focus our project on the specific issues faced within the humanitarian sphere.

Overall, Phase 1 has proved a valuable experience in terms of the preparations for Phase 2 – increasing our overall understanding of how to align our project outcomes with the end-user requirements for Phase 2.

INNOVATION OUTCOMES

Whether this innovative project was successful, not successful, or a mix of both, the HIF would like you to report as much detail as possible, so that success can be built on and failures can be learned from. By 'success' we mean that the innovation has achieved the planned positive impact/outcome, or that it has performed better than the current process, product or system.

2. Has the project demonstrated the success of the innovation? (Please choose only one answer.)

- Completely successful
- Significantly successful
- Partially successful
- Completely unsuccessful



2b. Please select the successes that your project have achieved:

(You may choose more than one)

- There is real evidence that the project achieved the planned outcome(s)
- There were perceived contributions or improvements to the planned outcome(s)
- Learning was achieved within the project cycle
- 'Lessons learned' were gathered and circulated to humanitarian stakeholders and actors
- The completion of this project has led to another innovation
- Other (please comment) _____

2c. Please select the challenges your project has encountered:

(You may choose more than one)

- The project did not complete its planned activities
- There is no real evidence that the project achieved the planned outcome(s)
- There were few perceived contributions or improvements to the planned outcome(s)
- Learning was not achieved within the project cycle
- 'Lessons learned' were not circulated to humanitarian stakeholders and actors
- Other (please comment): Challenges faced largely related to the short-time frame for the delivery of Phase 2 and working within a large team with varying schedules.

2d. If there is any evidence for the successful performance of the innovation, please describe it further:

The Phase 1 Scoping Study provides the evidence and details of all the activities we undertook as part of Phase 1. These activities have been highly important in informing the direction of the project and the guidance document that we are looking to produce, whilst further enabling us to build the required stakeholder links to make the overall project a success.

3. Please show the components of the project which contributed the most to any successes:

(where 1 = most influence 3 = least influence)

Component	1	2	3	N/A
Design and placement of the innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The methodology or approach to collecting evidence	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Context	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The availability of resources and capacities (financial, human, technical etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Success in identifying and responding to different project and innovation risks	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Strength of relationships and collaborations within the team and with other stakeholders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The process was flexible and responsive to emerging results	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to draw on experience and expertise of existing practice, codes and standards	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



4. Please show the components of the project which contributed the most to any unsuccessful elements of the project

Component	Yes- contributed to failures
Weaknesses in the design and placement of the innovation	<input type="checkbox"/>
The methodology or approach to collecting evidence	<input type="checkbox"/>
Context	<input type="checkbox"/>
A lack of access to resources and capacities (financial, human, technical etc.)	<input checked="" type="checkbox"/>
Difficulty in identifying and responding to different risks	<input type="checkbox"/>
Lack of good relationships and collaboration within the team and with other stakeholders	<input type="checkbox"/>
Having a process that was not flexible or responsive to emerging results	<input type="checkbox"/>
No ability to draw on experience and expertise of existing practice, codes and standards	<input type="checkbox"/>
Other:	<input type="checkbox"/>
Other:	<input type="checkbox"/>

5. What are the top three, key lessons learnt relating to the innovation? *This should relate to the innovation or the sector in which it operates, rather than project implementation.*

1. The importance of end-user engagement and involvement of humanitarian stakeholders throughout the development process, particularly to ensure that the guidance we are producing is relevant to the challenges they regularly encounter, and the time and resources required in managing and developing these relationships.

2. The significant number of challenges faced within this global field, which include both financial, social and cultural factors.

3. The importance of easy feedback mechanisms and ways of working between multiple partners, particularly in terms of collating feedback from multiple sources and facilitating group discussions.

6. Do the final outcomes support the initial rationale for the innovation?

- Yes, completely
- Yes, significantly
- Partially
- No, not at all

Please describe further:

7. How has your understanding of the innovation changed through the project period?

Phase 1 has allowed us to obtain a greater understanding of:

- The end-user (i.e. practitioner) wants for the format and structure of the guidance
- The context of the problems and differing factors which a practitioner faces, compared to that of implementing surface water management solutions in the UK
- The key humanitarian stakeholders and the need to align our project with their aims in order to create a successful project overall.

8. Did the innovation lead to any unexpected outcomes or results? How were these identified and managed?

No unexpected outcomes were obtained – only an increased understanding and awareness of the contexts of our project.

METHODOLOGY

9. Was the methodology successful in producing credible evidence on the performance of the innovation?

- Yes, completely
 Yes, significantly
 Partially
 No, not at all

Please describe further:

Through undertaking a review of available literature and a series of stakeholder engagement activities, we were able to use this information to develop the scope and direction of Phase 2, i.e. the guidance creation.

PARTNERSHIPS AND COLLABORATION

10. How and why did the partnership change during the course of the project?

The partnership between the organisations involved remained the same throughout the duration of the project.

11. Are there plans to continue your partnership, either while scaling up this innovation or on other projects?

- Yes, with this innovation
 Yes, with another project
 Maybe
 No

Please describe further:



We will continue this partnership into Phase 2.

DISSEMINATION

12. Please describe any steps taken to disseminate the outcomes of the project.

Please include all completed and forthcoming, as well as all planned and unplanned products (for example, research and policy reports, journal articles, video blogs, evaluations).

No dissemination activities have been undertaken as part of Phase 1, this will be undertaken in Phase 2 (if the proposal is accepted).

13. Has the project received any third party coverage during the project (from news media, third party blogs, researchers or academics etc.)?

Beyond the promotion of the stakeholder activities by the partners and ourselves within the public domain, we received no third party coverage.

Links to online material within the public domain include:

http://www.susdrain.org/news/articles/improving_surface_water_management_refugee_camps.html

<https://www.linkedin.com/pulse/improving-surface-water-management-refugee-camps-paul-shaffer/>

https://ovearup.onlinesurveys.ac.uk/drainage_camps3

SCALE UP AND DIFFUSION – WHAT NEXT?

14. Is the project or innovation to be replicated or scaled up?

- Yes, we will scale up in the same or similar context
- Yes, we will scale up within our organisation (including running more pilots or trials)
- Yes, we will replicate the innovation/project in another context or country
- Yes, the innovation/project will be replicated or scaled up by another organisation or stakeholder
- Yes, other
- No

If you answered yes to question 14, please answer 14b:

14b. What model are you pursuing to scale up or sustain your innovation?

- Applying for more donor funding
- Selling the innovation or patent
- Cost recovery (for example, selling your service or being paid as a consultant to implement the innovation)
- Innovation to be taken up by organisation or government as standard and included in standard planning and core funding by them
- Other _____

Please describe further:



15. If the project or innovation could be replicated or scaled up, please list the three most important issues or actions that will need to be considered:
(where 1 = most important and 3 = least important)

We are looking to use the knowledge obtained within Phase 1 to develop a guidance document for practitioners to use within the field. We would expect that Phase 2 has the potential to be scaled up.

Suggestion/issue	1	2	3
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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Appendix 1. Final Workplan

Below is a table that is the same as the workplan that you submitted with your original application. There are **three ways** to respond to this section.

1. If there have been no changes at all through the project you may cut and paste your original workplan here.
2. If there have been changes to the project but these changes **were previously reported to the HIF** in an *Agreement Amendment* form, please adjust your original workplan so that these changes are recorded in it here.
3. If there have been changes which were **not previously reported to the HIF**, please also fill in Table 2 (which is on the next page). In particular, please make sure to explain any budget various greater than 15% in Table 2.

Please paste your final workplan in here > *Please refer to following page for final project workplan*



Site Development Toolkit - Arup Final Workplan Undertaken for Phase 1		Responsible Party	Jun-17				Jul-17					Aug-17				Sep-17				Oct-17				
			05	12	19	26	03	10	17	24	31	07	14	21	28	04	11	18	25	02	09	16	23	30
Main planned activities & expected results:																								
Change	Project Definition and Agreements- Pre work																							
1	Confirmation of funding																							
	Plan for inception meeting	Project Manager (Arup)																						
	Inception Meeting and review of project details	All																						
	Deliverable- Project details & partnerships signing	All																						
Scoping/ Refugee Camp specific information / typologies etc.																								
2	Literature Review- available guidance	Arup (Guidance & support- Oxfam & WEDC)																						
	Desktop Analysis of Camp Typologies	Arup (Guidance & support- Oxfam & WEDC)																						
	Review of available guidance toolkits for surface water drainage	Arup (Guidance - WEDC)																						
	Review of related projects & expertise & developing practices	Arup (Guidance - WEDC)																						
	Identify surface water drainage solutions used in the field	Arup (Guidance & support- Oxfam & WEDC)																						
2	Submit information to Arup for report																							
Stakeholder Engagement																								
	Prepare online survey	Arup																						
3	Online survey of practitioners (Overall total of 3)	Arup																						
4	Review survey	Arup																						
	Organise workshop	Arup																						
4	Workshop: 2 * Stakeholder Workshop	Arup / WEDC																						
	Map out findings from workshop	Arup																						
5	Follow up with stakeholders where needed (i.e. interviews)	Arup																						
6	Presentation at Shelter 17	Arup																						
	Preparation of Draft Refugee Camp Scoping study analysis	Arup (with support from CIRIA & WEDC)																						
	External Review and Feedback	CIRIA, UNICEF, Oxfam																						
	Deliverable- Scoping Study Report																							

- Key Deliverable Date
- Project Activities
- Workshop Activities
- Holiday



Table 2: Changes to Workplan

For every change in the final workplan that is different to your original worktable AND that has not already been reported to the HIF, please add a record in this table. Changes can include alterations to the methodology, project process or innovation design, for example.

Change (as referenced in workplan above – as numbered in the initial column)	Reason for change	Overall impact of change
1. Project timescales	An initial delay in the project confirmation from HIF presented an overall delay to the project deadline. A further period of time was required to mobilise partners and Arup staff working on the project.	The project outputs to HIF were delayed from the originally proposed deadline.
2. Literature Review	The literature review was undertaken in two parts – an initial review and desktop collation exercise over the summer period, with updates and a full write-up following the workshops. This was partially due to lack of availability of resources over the summer period and further to allow for the incorporation of feedback and comments from the workshops to be incorporated within the proposals.	Less developed content was available for the workshops, however the modification to methodology allowed the literature review to be updated with comments from stakeholders and the outcomes of the workshops. The literature review was adapted and revised to suit the needs and present thinking of the project as it progressed throughout the Phase 1 life-span.
3. Multiple surveys over an extended period	We undertook a greater number of surveys over an extended period (obtaining information about practitioner’s general experience and case studies) – as we felt that keeping the engagement period open would obtain/encourage active participation from external stakeholders and overall be of benefit to the project.	Allowed for greater external participation and input.
4. Delay in reviewing survey and organising workshops	As the project timescale had shifted, this meant the initial stakeholder/workshop activities fell within the summer period – when many people are considered to be on-leave (UK Summer Holidays) or attending conferences globally. Hence, the workshops were proposed to be delivered in September.	Allowed for a greater availability of attendance and overall participation from stakeholders.
5. Interviews were undertaken over an extended period	Due to varying schedules of interviews and on-going engagement.	No major implications, allowed for greater input as the process was flexible.
6. Presentation at Shelter 17	We were invited to present at the Shelter Meeting 17.	Allowed for an opportunity to build relationships with the Shelter cluster organisations and humanitarians.



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