

Structural engineers in humanitarian and international development: a new resource map

Miriam Graham introduces a new tool from the IStructE Humanitarian and International Development Panel which aims to direct those working in, or curious about, the sector to key guidance and skills training.

Introduction

There is a great potential for structural engineers to have a positive impact by using their skills to support development in low- and middle-income countries and for humanitarian responses to disasters – especially with the rising challenges from climate change, the impacts of which will disproportionately affect those in the Global South.

There is also the challenge of how to meet the UN Sustainable Development Goals, when the current methods we have for development generally have high associated emissions¹. It is our responsibility as structural engineers to help answer the question: how do we build to develop communities, to be resilient into the future, and do so within our planetary boundaries?

The IStructE Humanitarian and International Development (HID) Panel has produced a resource map (**Figure 1**) to help equip engineers to address these challenges. The map highlights key resources from case studies and technical guidance, to databases and complementary skills training. Whether you've been in the sector and are looking for the latest information, are wanting to explore starting your career in the sector, or are interested in what it means to be a structural engineer in different contexts, the map has resources for you.

What is the HID Panel?

The IStructE HID Panel was formed in 2017 with the aims of supporting structural engineers within, or interested in, the sector through sharing knowledge and guidance, advocacy, outreach and networks. The panel's members come from a wide range of professional backgrounds and countries and have experience in a variety of fields: structural engineering for development projects, working for non-governmental

organisations (NGOs) and international funding organisations, post-disaster search and rescue specialists, and academics.

The panel has developed a range of content to support engineers, including a competency framework for those working in a humanitarian or international development context (www.istructe.org/resources/guidance/humanitarian-international-dev-framework). This follows the arrangement of the IStructE Initial Professional Development framework, but is tailored with the addition of supplementary skills, knowledge and competencies required for those operating in the sector.

What's in the new HID resource map?

The new HID resource map aligns with the different focus areas within the competency framework, highlighting key resources in these categories from both internal and external sources which are accessible for members to develop their knowledge and skills. The map is available on the Institution's website and the HID Panel page.

In the centre of the map sits **contextual awareness**, as this underpins all the principles of working within the sector. When working in new and different settings and cultures, we should carefully consider the value and skills we can offer alongside both the positive and negative impacts we may have on communities. This is explored further in the panel's FAQs on the IStructE website (www.istructe.org/resources/guidance/humanitarian-and-international-development-faq).

It is important for users to check and validate that the sources, information and design principles are relevant, and that they understand any limitations. We encourage designers to think about the differences between the source and the project and community they are applying it to.

A few resources as a panel we think would be a good place to start are:

- | **Working in the humanitarian or development sectors** (IStructE) – an article by the panel which provides a realistic overview of the practical and ethical considerations when seeking to work in the sector
- | **Career profiles** (IStructE) – introductions to different people working within the sector, including some of the panel members
- | **Humanitarian civil engineering: practical solutions for an interdisciplinary approach** (ICE) – a book which explores how to develop sustainable solutions integrating social, environmental, cultural and economic systems.

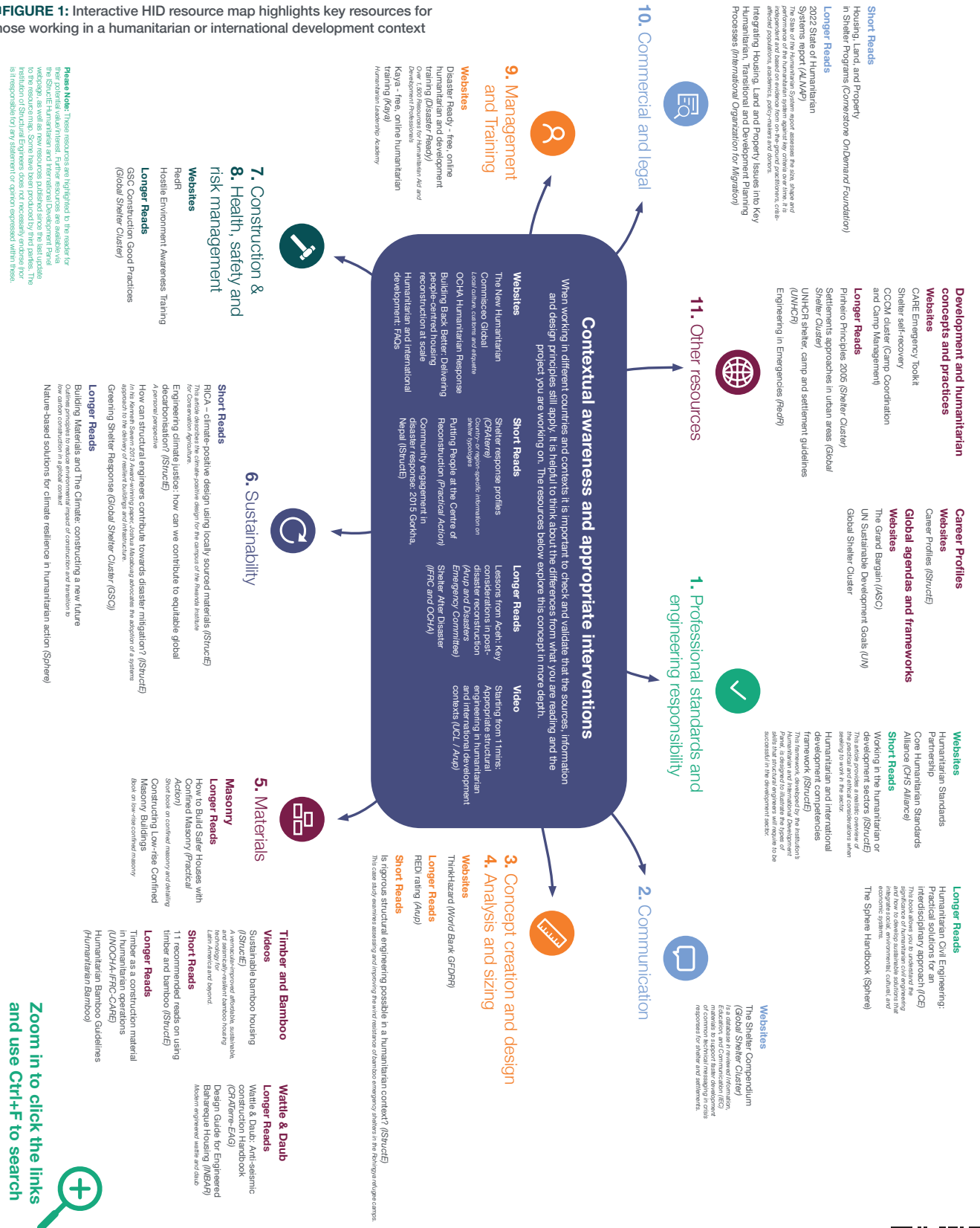
As a panel, we hope you find the map helpful and the resources interesting! We are aware that new resources are emerging all the time and will periodically update the map, so get in touch (technical@istructe.org) if there are resources you think should be included, if you have any feedback, or if there are any gaps for new resources or support you would like the panel to explore.

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REFERENCE

- 1) **Newby T. (2022)** 'Engineering climate justice: how can we contribute to equitable global decarbonisation?', *The Structural Engineer*, 100 (8), pp. 10–12; <https://doi.org/10.56330/ZWOT9464>

FIGURE 1: Interactive HID resource map highlights key resources for those working in a humanitarian or international development context



Please Note: These resources are highlighted in the map for their potential value to the sector. Further resources are available via the Shelter Humanitarian and International Development Portal website, as well as new resources published via the Red Update newsletter. The inclusion of Structural Engineers does not necessarily endorse or is it responsible for any statement or opinion expressed within these.

Zoom in to click the links and use Ctrl+F to search



Access the resource map
 The new humanitarian and international development resource map is an interactive guide to key resources in the sector.
 Explore the map at: www.istructe.org/resources/guidance/hid-resource-map