

WHO FUNDS WHAT?

Humanitarian research and innovation funding flows analysis

elrha

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EXECUTIVE SUMMARY

Never has the need for transformation in the humanitarian system been more acute.

The opening years of this decade have created conditions that have combined to drive a relentless increase in humanitarian need and a widening of the funding deficit for humanitarian response, placing millions of people out of reach of life-saving assistance. Humanitarians know the international aid system must change and must do so rapidly. But achieving change when resources are stretched beyond breaking point is a tough ask.

Research and innovation capabilities provide one potential resource to humanitarian actors that can not only support efforts to improve the effectiveness of response but can also accelerate processes of transformation and improve our ability to address the systemic challenges that underpin humanitarian challenges.

We know that sectors that consistently invest in research and development are more productive and adaptive than those that do not. Our research demonstrates that the humanitarian system is investing in research and innovation. However, our knowledge of where this investment is going and what difference it is making remains patchy at best.

Realising the full potential of research and innovation requires the ability to track where investments in humanitarian research and innovation are being made and a commitment to greater coordination and targeting of resources towards the most pressing needs.

This report tries to answer one of the biggest gaps in our current knowledge regarding humanitarian research and innovation: how much is being invested, by who and where is it going? The analysis set out to:



Quantify how much the humanitarian system has been spending on research and innovation.



Track the source, coverage and volume of the humanitarian research and innovation investments globally.



Determine the capability of our current systems to track spend and identify what needs to be done to improve them. We mapped the financial databases where humanitarian research and innovation spend is recorded, including the International Aid Transparency Initiative (IATI); the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Financial Tracking Service (FTS); and the Organisation for Economic Co-operation and Development (OECD) Creditor Reporting System (CRS).

These databases were then queried to identify humanitarian projects that were classed as, or had a component of, research or innovation between the years of 2017 and 2021. Available data about the focus of the projects and the value and source of the funding was subsequently downloaded and analysed.

In the absence of spending targets or specific priorities for humanitarian research and innovation, it is not possible to analyse the sufficiency of funding compared with recognised humanitarian needs or identify gaps between humanitarian needs and research and innovation funding requirements.

We present the analyses in the report with the caveat that critical data was missing in the databases about the type, destination and coverage of humanitarian research and innovation investments. Therefore, the findings and data presented should be considered as illustrative, but not descriptive nor comprehensive, of the current humanitarian research and innovation funding landscape.





Funding sources

Funding for research and innovation in the humanitarian system comes both directly from humanitarian assistance budgets and from general research and innovation grants that would not consider themselves to be part of the humanitarian system, but fund work that addresses humanitarian themes. Our analysis found that the volume of funding for humanitarian research and innovation that is coming from outside the system is considerably bigger than that which comes from within humanitarian assistance budgets.

For the funding sources identified from within humanitarian assistance budgets, our research found that the most significant funding came from donors based in Germany, the US and the UK. This finding correlates to the wider landscape for humanitarian funding in which, according to the 2022 Global Humanitarian Assistance Reportⁱ, the US, Germany and the UK have been the three largest humanitarian donors every year for the past decade.

When accounting for non-humanitarian research and innovation funding, the EU Horizon 2020 programme accounted for 15.6% of humanitarian research and innovation funding reported to OCHA FTS, making it the second largest donor for humanitarian research and innovation after Germany. Notable investments also came from private sector actors, such as the Bill & Melinda Gates Foundation, Mastercard, IKEA and Wellcome.



Funding volume

The different databases we analysed capture varying levels of spending on humanitarian research and innovation. Our findings suggest that funding from within humanitarian assistance budgets remains consistently low as a percentage of overall humanitarian resources. The analysis of the IATI database shows that less than 0.2% of the overall humanitarian assistance budget between 2017 and 2021 was allocated to address humanitarian issues through research and innovation.

Despite the evolving role of research and innovation in humanitarian response, these results indicate that the funding for humanitarian research and innovation has failed to increase. The humanitarian system remains in the bottom list of sectors and industries investing in research and innovation.



Funding coverage

Significant data is missing from the databases about the type, destination country and focus of humanitarian research and innovation investments. The destination country data for humanitarian research and innovation funding was missing or reported as 'global' in more than half of the data available on OCHA FTS and IATI. However, the available data suggests that Yemen, Afghanistan and Sudan were the top three countries where humanitarian research and innovation projects were implemented.



Funding to local actors

Increasing the direct funding to local actors has been a priority for the humanitarian system since the Grand Bargainⁱⁱ. We wanted to understand whether funding for humanitarian research and innovation was aligned to this commitment. Our analysis used the type and location of organisation receiving the funding as a proxy measure to assess the volume of humanitarian research and innovation funding directed to local actors. The analysis found that, while a small number of recipients of project funding for humanitarian research and innovation are located in crisis-affected regions, the majority are located in high-income countries at a distance from humanitarian crisis events.

Recommendations

- Build stronger relationships and bring funders outside of the humanitarian system into the research and innovation ecosystem. Communicating and organising around clearly articulated research and innovation priorities might provide a strong opportunity to achieve better coordination and build strong partnerships. This research suggests that funding for humanitarian research and innovation continues to rely on a small group of funders within the humanitarian system. However, perhaps the biggest opportunity revealed is the significant contribution of funders based outside of the humanitarian system.
- Devote more work and commitment to shifting priority setting, decision-making and funding allocations to those who are closer to where humanitarian needs are experienced. The research demonstrates that the overall funding landscape for humanitarian research and innovation remains unchanged. Donors from Europe and North America continue to lead on funding humanitarian research and innovation. Actors in high-income countries continue to receive most of this funding.
- Improve the way the humanitarian system reports its spending on research and innovation by creating better frameworks. Tracking research and innovation investments through the humanitarian databases has been extraordinarily challenging. To create better visibility of these investments, it is vital that we develop better frameworks that consolidate tools, platforms and codes to allow the humanitarian system to improve how it reports its research and innovation spending.

The biggest opportunity revealed is the significant contribution of funders based outside of the humanitarian system.

Moving forward

This report and its results have presented an illustrative snapshot of the current humanitarian research and innovation funding landscape. It is a first attempt at a rigorous process to track humanitarian research and innovation funding allocations through the databases that are available.

Through this process we have highlighted many weaknesses in the current data and an urgent need to improve tracking for humanitarian research and innovation investments. The greatest fruits of this exercise will be borne when it is replicated, allowing a comparison of coverage and the tracking of trends in funding over time.

Finally, this work has demonstrated the need to improve financial reporting for humanitarian research and innovation. Organisations reporting their research and innovation spending and agencies hosting funding databases are encouraged to reflect on these findings and implement measures to improve the quality of the data on the size and coverage of humanitarian research and innovation.

Chapter 1:

Introduction

CHAPTER 1: INTRODUCTION

Growing and changing needs

The challenges and complexities facing the humanitarian system are continuing to increase. COVID-19 and its effects have increased humanitarian need in countries already struggling to cope with poverty, conflict, climate change and other disease outbreaks. The economic impact of COVID-19 pushed at least 20 million additional people into extreme poverty in 17 countries with a Humanitarian Response Plan (HRP) in 2021^{III}.

The gap between humanitarian needs and requirements narrowed slightly but remained large.

According to the Global Humanitarian Assistance Overview, in 2021:



56% (\$21.4 billion) of the UN-coordinated appeals' funding requirements (\$38.4bn) were covered, up from **51%** in 2020 (\$20.1bn out of \$39.3bn)^{iv}.

The humanitarian system was already struggling to meet the rising humanitarian needs. COVID-19 has caused a shockwave in the global economy, making it even harder to meet the fast-growing humanitarian funding requirements.

Research and innovation

In this global context of rapidly growing and complex challenges and humanitarian crises, there is a need for the humanitarian system to become more agile, flexible and responsive to achieve its objectives in identifying, mitigating and responding to humanitarian crises to reduce suffering for people affected by humanitarian crises.

We consider research and innovation as an interlinked strategic process to achieve an impactful humanitarian response.

Research and innovation are part of a deliberate effort to explore problems, find solutions and improve policy and practice. Research is a process of inquiry or learning, and innovation is about putting learning into practice with the aim of making improvements. Research can lead to innovation, and innovation can generate research.

Both research and innovation contribute to the creation of evidence and use this to drive change in support of improved humanitarian performance. While the relationship between research and evidence is well-recognised, evidence producing methodologies are also important in innovation practice.

Nowadays, humanitarian actors and donors need to adapt, change their ways of working and use their knowledge constantly. To do so, systematic change is required in all the humanitarian system dimensions (economic, cultural, political and technological). Research and innovation are great assets that the humanitarian system can leverage to better understand the stakeholders involved in its response, identify the contextual evolving needs and propose efficient and relevant responses to emerging challenges.

Over recent years, the humanitarian research and innovation architecture has rapidly evolved^{vi}. A range of initiatives to support and fund humanitarian research and innovation have emerged. Humanitarian research and innovation are essential to ensure that the system is well equipped to identify and best respond to crises and new challenges as they arise.

So, too, is ensuring efficient and equitable use of research and innovation resources and maximising return on investments, with the ultimate objective of improving the way the humanitarian system responds to crises and serves populations in need.

The evolution of innovation in the humanitarian system was strongly linked to improving cost effectiveness and efficiency. This has led to conceptualising innovation with technical fixes and new products. With digital and technological innovations opening doors for new practices in the humanitarian system, they became one of the most mentioned types of innovation in the sector^{vii}. Humanitarian innovation developed to include adopting new processes and novel practices, as well as improving partnerships between humanitarian actors – and between the humanitarian system and other sectors, such as the private sector.

Innovation is no longer only seen as a tool to improve effectiveness and efficiency in the humanitarian system. It is now also perceived as a potential game-changer that can lead to transformative change in the humanitarian system^{viii}.

Innovation can help to reshape the humanitarian system by resolving the internal and external barriers that prevent the humanitarian system from operating more effectively. Innovative new ways of working can help reform the humanitarian system, which is often seen to be top-down, backward-looking and held back by traditional processes^{ix}.

The humanitarian system is increasingly using evidence to inform humanitarian policies and practices. Evidence coming from research plays a critical role in advising what works and what doesn't work, when and where, and for whom.

Humanitarian research and innovation funding landscape

Many professional sectors place a central role for science, research *and* innovation in the development and evolution of practice over time. The humanitarian sector should be no different to others in this respect.

In the last decade, there has been a significant increase in attention and activity on research and innovation in the humanitarian system. That said, the overarching ecosystem for research and innovation remains underdeveloped and spend on research and development (R&D) across the sector remains low.

Cuts in aid budgets have also resulted in cuts to humanitarian research and innovation budget allocations, with profound implications for the humanitarian research sector, local researchers, innovators and, ultimately, crisis-affected populations^x.

Assessing the volume and coverage of humanitarian research and innovation investments can help us understand the impact of these investments on the humanitarian system's performance. It allows greater coordination between funders, helping them to align investments to the most pressing humanitarian needs.

One of the biggest gaps in our current knowledge regarding humanitarian research and innovation is the lack of data on the financial value of current investments.

The best effort to quantify spending to date has been provided through the 2015 Deloitte study on research and development funding for the World Humanitarian Summit. This identified that current spend was equivalent to less than 0.4% of total humanitarian resources, putting the humanitarian sector below even the most low-tech of industries in terms of their investment in R&Dxi.

By contrast, global humanitarian assistance financial flow patterns are now well characterised and tracked through the OCHA FTS. As compared with the voluminous evidence and literature on humanitarian assistance funding, there has not been a systematic effort to understand and characterise financial flows to humanitarian research and innovation, and any gaps therein. Such an effort is necessary to:

- understand how funding for humanitarian research and innovation corresponds with the recognised humanitarian needs.
- support the humanitarian system with understanding the return on investment and value for money of the research and innovation spending.
- identify which crises receive research and innovation attention and investment and which do not.
- create better visibility of humanitarian research and innovation financing to enable greater coordination between the research and innovation funders.
- guide investment strategies and decisions in the humanitarian research and innovation ecosystem.

Who funds what? Humanitarian research and innovation funding flows analysis

One of the key questions that our 2017 Global Mapping Exercise^{xii} set out to answer was, 'What is the current research and innovation funding landscape?' While the report provided a detailed baseline for the type and location of humanitarian research and innovation funders, major gaps in data made it challenging to assess the volume or track the funding to the humanitarian research and innovation system.

As part of the current GPE, we have conducted an inquiry focusing on assessing the volume, type, sources and recipients of humanitarian research and innovation funding between 2017 and 2021. The next chapters of this report highlight the findings of this inquiry. The detailed methodology can be found in chapter 6.

The scope of our research and the estimates presented in this report are related to humanitarian sector research and innovation. Investments in research and innovation outside the humanitarian sector (eg, transportation, construction engineering and satellite technology) that were used by it were not collected; however, investments within the humanitarian sector allocated for adaptation, piloting and scaling of these existing innovations were reported when tracked in the funding databases we gueried.

Chapter 2:

Humanitarian research and innovation funders

CHAPTER 2: HUMANITARIAN RESEARCH AND INNOVATION FUNDERS

The need to widen the donor base for humanitarian assistance is long recognised.

Our 2017 Global Mapping Exercise, based on a literature review, provided a baseline for the major funders of humanitarian research and innovation in 2016–2017. This chapter looks at the main funders reporting humanitarian research and innovation spending in the financial databases. It also examines the type of funding donors use to support research and innovation in humanitarian settings.

Funders reported in the financial databases

Funding for humanitarian research and innovation (hereafter 'HRI') comes from two main streams:

- 1. Humanitarian assistance and development budgets (within the humanitarian sector budget)
- 2. General research and innovation budgets (outside the humanitarian sector budget)

Funding to HRI from within the humanitarian sector, ie, as part of humanitarian assistance funding, would showcase the humanitarian sector's commitment to generating evidence to support humanitarian action and developing innovative solutions to humanitarian needs.

Funding to HRI from outside the humanitarian sector, ie, through general research and innovation budgets, showcases the commitment of the research and innovation community across different sectors to address humanitarian issues impacting vulnerable communities around the world.

To identify the HRI funders, we analysed public data from IATI, the OCHA FTS and the OECD CRS about humanitarian projects funded between 2017 and 2021 that were classed as, or had a component of, research and/or innovation.

Information about the source, name and location of the funder was used to identify the HRI funders.

We used projects' budgets to calculate the total volume of funding for each funder.

In the databases we searched, research activities are largely embedded and reported within humanitarian assistance projects as needs assessments, operations research and programme evaluations. Innovations may be a direct result of a project's central R&D function or generated from another process, such as adapting the results of others' R&D.

Since many of the innovative processes and products that are developed outside the humanitarian system can be leveraged by humanitarians to support anticipation and response to crises, a clear definition of 'HRI investments' is needed to understand the full picture of the HRI funding landscape and recognise the contributions of other sectors to HRI.

There are several sources of funding for HRI globally within these two streams. The table below (table 1) includes the databases searched to identify the HRI funders and the type of funding sources and funding channels:

Table 1 Sources and channels for official HRI funding

Data source	Funding sources	Funding channels
IATI		Public sector institutions Donor governments Recipient governments Third party governments (delegated co-operation)
	Official donors • Development assistance committee (DAC) countries • Non-DAC countries • Multilateral organisations ◊ United Nations ◊ European Union (EU) ◊ International Monetary Fund (IMF) ◊ World Bank Group ◊ Regional development banks ◊ Other multilateral	Nongovernmental organisations (NGOs) and civil society International NGOs Donor country-based NGOs
OCHA FTS		 Developing country-based NGOs Public-private partnerships (PPPs) and networks Multilateral organisations United Nations agency, fund or commission European Union (EU) institutions International Monetary Fund (IMF) World Bank Group
OECD CRS	institutions • Private donors	 Regional development banks Other multilateral institutions University, college or other teaching institutions, research institute or think-tank Private sector institutions Private sector in provider country Private sector in recipient country Private sector in third country
European Union Community Research and Development Information Service (EU CORDIS)	European Commission	Horizon 2020 programme grants

It is important to note that, to identify the main HRI funders, this exercise only considered the data reported publicly regarding the number and value of HRI projects in IATI, OECD CRS and OCHA FTS. The exercise did not take into account the funding committed or provided by individual funders, which might not be reported to IATI, OECD CRS and OCHA FTS or might be reported elsewhere. As such, these findings should be seen as only one part of the true picture of the HRI funders. They would need to be complemented by other processes to generate a full understanding of the current funding landscape.

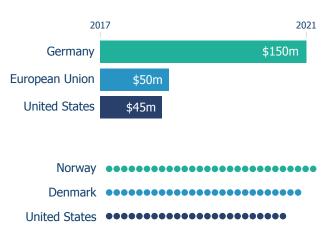
We observed disparities across the databases on who the main HRI funders are. For example, the UK appeared as the largest HRI funder in OECD CRS and the second largest funder in IATI, while OCHA FTS had only three HRI projects funded by the UK, making it the seventh highest funder for HRI. This example illustrates the need for a better framework to track and report HRI spending.

OCHA FTS – Funders' locations

When looking at the volume of funding for HRI, the OCHA FTS database shows that:

Germany was the main funder of HRI in terms of funding amounts between 2017 and 2021 (\$150m), followed by the European Union (\$50m) and the United States (\$45m).

Norway funded the largest number of projects (28), followed by Denmark (26) and the United States (24).



In the OCHA FTS database, the location and type of funding organisation were not consistent across the database.

The 'source location' field was missing in 81 records. We assigned 55 of them to their respective country mentioned in the 'project description'.

The following table (table 2) shows the list of the main funders of HRI activities and the number of projects they funded:

Table 2 Top funders of HRI flows between 2017 and 2021 in OCHA FTS

Source location	Number of projects	Total amount (\$)	% of total
Germany*	13	150,442,675	46.7%
European Union	20	50,322,605	15.6%
United States	24	45,286,380	14.1%
Denmark	26	23,138,606	7.2%
Belgium	5	17,139,395	5.3%
Norway	28	16,204,147	5.0%
United Kingdom	3	4,782,543	1.5%
Australia	21	4,464,326	1.4%
Other**	41	10,096,301	3.1%
Total	181	321,876,978	100%

- Countries that contributed less than 1% of their total budget.
- Within the data available on OCHA FTS, countries that have reported less than 1% of funding (actual figure may be higher).
- Countries in this group include Sweden, France, Japan, Switzerland, Luxembourg, Brazil, Estonia, Ireland, Bulgaria, Spain, Italy, United Arab Emirates and Saudi Arabia.

^{*} Most of the funding provided by Germany (\$130m) went to WHO in a single flow related to R&D within the country's COVID-19 strategic preparedness and response plan.

^{**} This group represents two types of funder:

IATI – Funding organisations

The IATI database relies on reporting by both funders and intermediary organisations through which funding flows. It does not allow for clear separation of these two sets of bodies.

Our analysis for the IATI database shows that UNICEF was the source of most (around half) of the HRI-specific funding reported to IATI, followed by the UK Foreign, Commonwealth & Development Office and Save the Children International, which reported 35.5% and 5.9% of total HRI specific funding, respectively.

The IATI database includes a field for the reporting organisation that is issuing the report.

According to IATI documentation, a reporting organisation may be a primary source (reporting on its own activity as donor, implementing agency, etc.) or a secondary source (reporting on the activities of another organisation). All IATI data in this report are provided by primary reporting organisations.

The following table (table 3) shows the main reporting organisations reporting HRI-specific projects and the number of activities reported. It is important to note that total figures in this table are not conclusive because of the role of the intermediate funders. Although we cleaned the data to avoid double counting, there is still a risk of double counting some of the funding sources when both the main and the intermediate funders are reporting the same grants.

Table 3 Total amounts and number of activities per reporting organisation (IATI 2017, 2021)

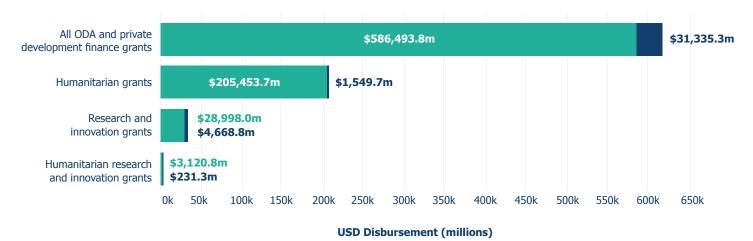
Reporting organisation	% of total	Amount (\$)	Number of activities
UNICEF	49.7%	245.5m	110
UK Foreign, Commonwealth & Development Office	35.3%	174.2m	117
Save the Children International	5.9%	29.0m	17
Elrha	2.3%	11.5m	3
International Rescue Committee Inc.	2.2%	10.7m	10
UK Department of Health and Social Care (DHSC)	1.1%	5.3m	1
Other organisations (this group contains 13 organisations, each reporting less than 1% of total HRI-specific funding)	3.6%	18.0m	27
Total	100%	494m	285

OECD CRS – Donors per funding type

For analysis, we included only official development assistance (ODA) grants and private development finance standard grants. The total amount going to HRI was \$2.3bn, which was 1.32% of the amount of humanitarian grant funding reported on OECD CRS.

It is critical to note that the \$2.3bn represents the total funding that went to humanitarian projects with a research and/or innovation component between 2017 and 2021, and it doesn't present the real direct funding to HRI. The lack of specificity about nature, scope and budget of the research and/or innovation components made it difficult to quantify the total direct funding to HRI. Figure 1 below shows disbursements of ODA and private finance grants reported to OECD, 2017–2021:

Figure 1 Disbursements of ODA and private finance grants reported to OECD, 2017–2021



Source: OECD CRS

Flow name

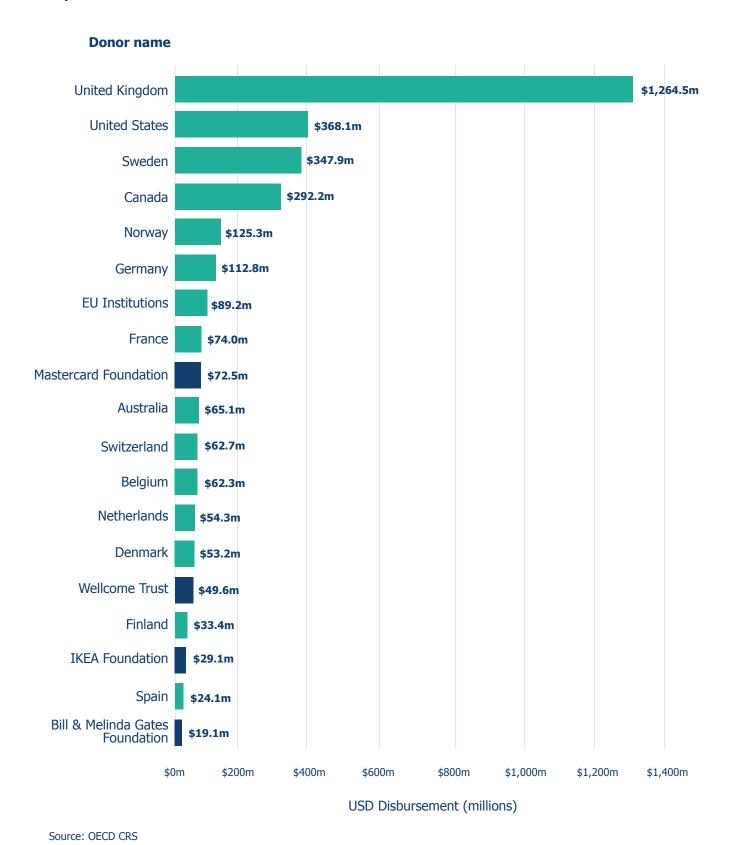
Private development finance

ODA grants

There were 50 ODA grant funders and 26 private funders to HRI. Figure 2 shows all the organisations that donated \$15m or more to HRI projects, as reported to OECD during the 2017–2020 period.

According to OECD CRS data, the UK, Sweden and the US were the top three national funders through ODA grants.

Figure 2 Organisations that donated over \$15m to HRI projects, by flow type, reported 2017–2020 to OECD



Flow name

ODA grants

Private development finance

The big picture

Our 2017 Global Mapping Exercise, through our desk review, identified the main funders for HRI based on the frequency (number of outputs funded) of funders' support. It did not consider the volume of funding provided by individual funders.

The report said:

"The vast majority of both Research and Innovation Funders and funding recipients (i.e. Actors) are currently headquartered in Europe and North America, with the primary Funder and Actor headquarters concentrated in the United Kingdom (UK) and the United States of America (USA)."

Although drawing solid comparisons between this report and our 2017 Global Mapping Exercise Report would be misleading, this inquiry demonstrates that the overall funding landscape for HRI remains unchanged. Funders from Europe and North America continue to lead on funding HRI.

Funding for HRI still relies on the same small group of funders. While new funders, such as private foundations, are emerging in this space and increasing their investment, there is still a need to diversify the funding portfolio for the HRI ecosystem.

The Global Humanitarian Assistance Report 2022 shows that the US, Germany and the UK have been the three largest humanitarian donors every year for the past decade. Our analysis also shows that the US, Germany and the UK, alongside Sweden, Canada and Norway, are the leading countries for HRI funding through their humanitarian assistance budgets.

When accounting for funding to address humanitarian challenges through general research and innovation grants, the EU through the Horizon 2020 project accounted for 15.6% of funding reported on OCHA FTS. This makes it the second largest for HRI donors after Germany.

This report focused on two components of direct humanitarian research investment: (1) spending as part of humanitarian assistance budgets and (2) spending as part of overall research and innovation grants (eg, EU Horizon programme).

There are also indirect investments – for example, R&D investments in other sectors that are leveraged by humanitarian practitioners to support the humanitarian response. The complexity of funding flows from the various funders for HRI suggests that there is a need to improve the existing financial reporting databases to allow better reporting and monitoring for HRI investments.

In the absence of a system-wide approach, codes and a platform for reporting HRI funding, this report shows different results on the funders of HRI across the various databases.

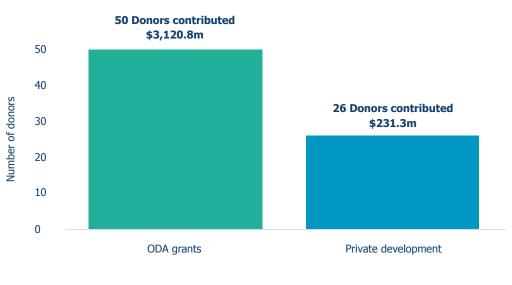
While OCHA FTS shows the geographic location of the funding organisations, IATI revealed more detailed information on the type of funder organisation. But it is important to note that the vast majority of HRI funders were based in Europe and North America, and they used their ODA budgets to invest in HRI. The next chapter (chapter 3) looks at how much these donors invested in HRI across different humanitarian issues.

The private sector

With the number of humanitarian crises increasing, public financing alone is no longer sufficient to respond to growing needs. The private sector continues to prove its capacity to quickly mobilise resources on the ground and strengthen emergency preparedness and recovery^{xiii}.

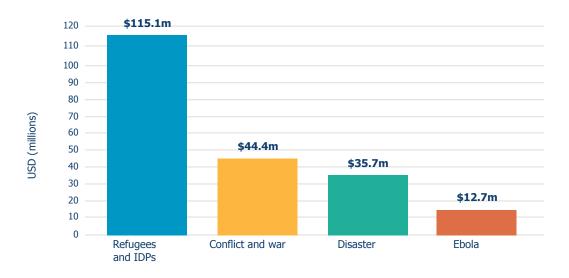
This exercise noted considerable contributions from the private sector to the HRI community.

Figure 3 Number of donors and amount donated to HRI, by flow type, reported to OECD 2017–2020



Disbursement USD (millions)
\$231.3m 3k

Figure 4 HRI grant disbursements by humanitarian crisis focus and financial flow type, reported to OECD 2017–2020



Source: OECD CRS

Private sector funding volume to HRI: According to the OECD CRS data, the private sector has invested \$231.298m in HRI between 2017 and 2021, accounting for around 10% of the overall HRI funding reported to OECD.

Private sector actors: There were 26 unique private sector actors visible on the OECD CRS. The Mastercard Foundation, Wellcome, the Bill & Melinda Gates Foundation and the IKEA Foundation led in private development finance grants.

Private sector focus: HRI projects related to refugees and IDPs were the focus of private sector investments. Private sector investments in HRI were mainly distributed to local NGOs and UN agencies.

Some private sector actors received funding from government donors to implement HRI projects. This finding suggests that the role of the private sector hasn't been limited to providing financial resources. The private sector's capabilities have also been leveraged to accelerate, strengthen and sustain humanitarian responses.

The private sector is still far from being systematically included in humanitarian coordination systems. More needs to be done to fully leverage the private sector's expertise and contribution to principled, accountable disaster response and recovery in sudden-onset and complex emergencies, whether in natural hazards, pandemics or human-made conflicts^{xiv}.

Chapter 3:

Humanitarian research and innovation funding source and volume

CHAPTER 3: HUMANITARIAN RESEARCH AND INNOVATION FUNDING SOURCE AND VOLUME

This chapter examines the scale of HRI funding.

In the absence of HRI spending targets or specific appeals, it is not possible for this exercise to analyse the sufficiency of funding compared with the recognised humanitarian needs or identify gaps between humanitarian needs and research and innovation funding requirements.

Funding volume by source

The table below (table 4) shows the type of funding and the financial instruments used to distribute the HRI funding reported across the different databases. It shows that most of the HRI funding was distributed through restricted grants.

Table 4 Resources used for investments into HRI, by data source

Types of funds used in HRI investments		Financial instruments used to disburse funds for HRI				
reported to these databases	Public sector	Private sector	Cooperative agreements	Direct and interest subsidies	Grants	Scholarships or fellowships
OCHA FTS	✓	~			/	
IATI	~	~			/	
OECD CRS	~	~		~	✓	
EU CORDIS Horizon 2020 programme	~				~	

According to OECD CRS data, most public and private sector funding for HRI was for project-type interventions, followed by support for implementing partner-managed programmes and other technical assistance (figure 5). Less than 10% of funding was for core support to NGOs, private organisations, public-private partnerships and research institutes.

Figure 5 HRI grant funding by co-operation modality and flow type, reported to OECD 2017–2020

		Standard grant		
	Grand total	ODA grants	Private development finance	
Grand total	\$3,352.1m	\$3,120.8m	\$231.3m	
Project-type interventions	\$1,852.5m	\$1,709.0m	\$143.5m	
Contributions to specific-purpose programmes and funds managed by implementing partners	\$608.8m	\$607.4m	\$1.4m	
Core support to NGOs, other private bodies, PPPs and research institutes	\$464.2m	\$455.7m	\$8.5m	
Other technical assistance	\$377.0m	\$308.6m	\$68.4m	
Development awareness	\$16.6m	\$7.6m	\$9.0m	
Donor country personnel	\$12.2m	\$12.2m		
Basket funds/pooled funding	\$6.5m	\$6.5m		
Refugees/asylum seekers in donor countries	\$5.8m	\$5.8m		
Scholarships/training in donor country	\$5.3m	\$4.9m	\$0.4m	
Administrative costs not included elsewhere	\$3.1m	\$3.1m		

USD Disbursement \$0.4m 2k

Source: OECD CRS

Figure 6 shows the volume and type of funding reported to OECD between 2017 and 2020 (data extracted using the humanitarian sector codes 700–799 on OECD CRS):

- Fewer than 8% of projects and about 10% of funding for HRI came from the private sector.
- Public sector funding was primarily in bilateral aid.
- Less than 2% of HRI funding overall was in the form of multilateral outflows.

Figure 6 HRI funding by type, reported to OECD, 2017–2020

	ODA grants	Private development finance
Bilateral	\$2,621.0m	
Bilateral, core contributions to NGOs and other private bodies/PPPs	\$442.4m	
Private sector outflows		\$231.3m
Multilateral outflows	\$42.3m	
Bilateral, ex-post reporting on NGOs' activities funded through core contributions	\$13.3m	
Bilateral, triangular co-operation. Activities where one or more bilateral providers of development co-operation or international organisations support South-South co-operation, joining forces with developing countries to facilitate a sharing of knowledge and experience among all partners involved	\$1.8m	
Source: OECD CRS		
JSD Disbursement		
\$1.8m 3k		

Funding volume by humanitarian topic and database

Funding from within humanitarian budgets (IATI and OCHA FTS)

We examined the proportion of research and innovation investment in the total international humanitarian assistance budgets in various databases. IATI was the only database that allowed us to calculate HRI-specific funding using the projects' reporting codes.

With the absence of the project reporting codes in OCHA FTS and OECD CRS, we used the HRI envelope funding approach to estimate the total spending on HRI.

We calculated the estimates for the volume of investments based on the available data for projects active during the 2017–2021 period:

This inquiry classified the investments for HRI in two categories:

- The HRI-specific funding: this refers to the volume of funding for projects that were solely focused on research and/or innovation in humanitarian settings.
- The HRI envelope funding: this refers to the volume of funding for humanitarian projects that had research and/or innovation components.

More details about these two categories can be found in chapter 6.

- In the IATI database: HRI-specific funding totalled nearly half a billion US dollars during 2017–2021. This represents 0.19% of all humanitarian funding reported over 2017– 2021.
- HRI envelope funding in IATI totalled \$25.7bn, accounting for 9.8% of the total humanitarian assistance budget.
- HRI envelope funding in OCHA FTS was \$2.3bn, accounting for 0.26% of the total humanitarian assistance budget.
- HRI envelope funding in OECD CRS was \$322m, accounting for 1.32% of the total humanitarian assistance budget.

The IATI database included the OECD sector (purpose) codes, including ten research sectors such as agriculture, education, medical environmental research, as well as the percentage allocated to each of them. This information allowed us to track the amounts allocated to HRI compared to the overall humanitarian spending. The data shows a consistent increase in the percentage of HRI funding from 0.12% in 2017, 0.18% in 2018, 2019 to 0.21 and 0.26 in 2020 and 2021, respectively, as shown in figure 7.

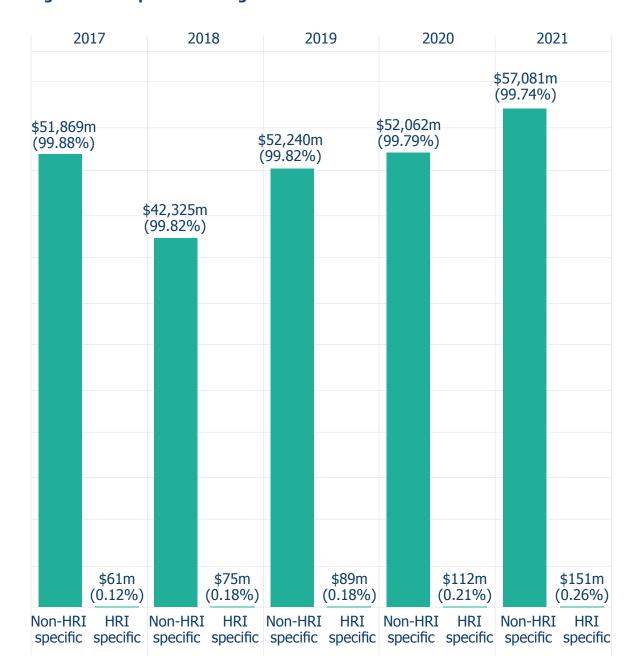


Figure 7 HRI-specific funding trend between 2017 and 2021

The 'collaboration type' classification in the IATI database is used to determine the character of resource flows (bilateral or multilateral). The IATI data shows that half of the HRI-specific budgets are allocated through multilateral outflow collaborations and around 43% through bilateral collaborations. The collaboration type was not specified in 7% of the funding. Lastly, the collaboration type of 0.1% of the funding was multilateral (inflows), as shown in figure 8.

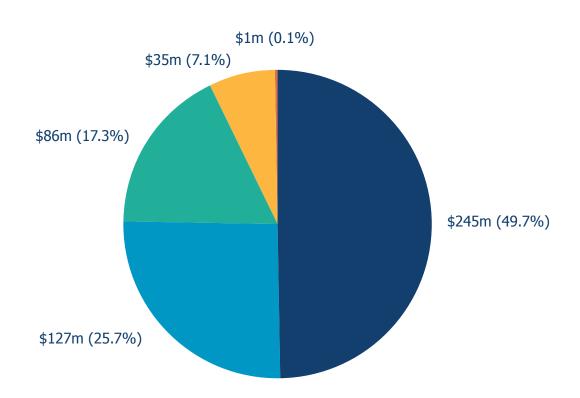


Figure 8 HRI-specific funding per collaboration type (IATI, 2017–2021)

Total HRI-specific funding: \$494m – IATI 2016–2021

Collaboration type

- Multilateral outflows
- Bilateral
- Bilateral, core contributions to NGOs and other private bodies/PPPs
- Null
- Multilateral (inflows)

Funding from outside humanitarian budgets

Funding to HRI also comes from outside humanitarian assistance budgets, including general research and innovation funding. There are many global, regional and national bodies that provide such funding.

An example examined in this inquiry is EU CORDIS. One-tenth of all European Commission Horizon 2020 projects, captured in EU CORDIS, focused on HRI, and approximately 10% of Horizon 2020 programme funding went to HRI in the form of research grants, totalling €9bn.

Table 5 HRI compared to all other European Union Horizon 2020 projects, 2017–2021

	Number of projects	Total cost	Mean total cost	Median total cost	Min. total cost	Max. total cost
Humanitarian research and innovation	3,825	€10,428,269,607	€2,726,345	€1,495,778	€42,000	€182,018,216
Any other research and innovation	28,154	€71,541,508,572	€2,541,078	€1,414,123	€6,896	€1,329,689,212

Excludes projects with zero total cost

Source: European Commission. (2022, March 16). CORDIS – EU research projects under Horizon 2020 (2014–2021) Publications Office of the European Union. https://doi.org/10.2906/112117098108/12

Funding volume by humanitarian topics

HRI-specific funding mostly was spent on protection, education and health. Emergency telecommunication, shelter and non-food items, early recovery, and camp coordination and camp management (CCCM) were among the least funded sectors.

The following table shows the frequency of mentions and the number of projects that mentioned each of the 11 humanitarian subsectors.

Table 6 Number of mentions of each humanitarian subsector and the funding of their projects (OCHA FTS and IATI, 2017–2021)

	IATI (HRI envelope)		OCHA FTS (H	IRI envelope)
Subsector	Budget value	Number of mentions	Amount	Number of mentions
CCCM	\$240.7m	448	\$3.1m	3
Early recovery	\$166.3m	339	\$5.2m	4
Education	\$10,913.9m	8,875	\$36.6m	15
Food security	\$529.4m	833	\$4.8m	5
Health	\$10,306.1m	7,452	\$3.9m	10
Logistics	\$995.5m	794	\$0m	0
Nutrition	\$7,574.0m	5,393	\$7.2m	5
Protection	\$7,514.1m	10,191	\$29.1m	36
Shelter and non-food items (NFI)	\$159.0m	294	\$7.4m	5
Emergency telecommunication	\$0.0m	1	\$0m	0
Water, sanitation and hygiene (WASH)	\$6,187.7m	4,627	\$1.8m	2

Funding volume by type of humanitarian crisis

To estimate the differences in funding allocation by the type of humanitarian crisis, we used the following categories: conflict and war, disaster, refugees and IDPs, and Ebola. We searched for the equivalent of these words in French and Spanish.

Each activity may address more than one humanitarian crisis. Table 7 shows the HRI funding and number of budgets/flows by the type of humanitarian crisis (IATI and OCHA FTS, 2017–2021). In the IATI database, we found that activities mentioning refugees and IDPs in their description received the highest funding (14%), followed by conflict and war (9%), disaster (4%) and Ebola (1%).

In the HRI-specific funding, disasters received the highest funding. HRI envelope estimates differed between IATI and OCHA FTS. IATI data show refugees and IDPs and conflict and war areas receiving the most funding, while OCHA FTS data shows that disasters received the most funding:

Table 7 HRI funding and number of budgets/flows by the type of humanitarian crisis (IATI and OCHA FTS, 2017–2021)

Source	HRI funding category	Humanitarian crisis type*	% of total funding	Amount in millions (USD)	Number of activities/flows mentioning crisis type
		Conflict and war	10.2%	50	24
		Disaster	13.1%	65	33
	HRI-specific	Refugees and IDPs	12.3%	61	38
		Ebola	0.0%	0	0
TATT		Any crisis type	31.4%	155	86 activities
IAII	HRI envelopes	Conflict and war	9.3%	2,394	361
		Disaster	3.5%	900	425
		Refugees and IDPs	14.2%	3,635	355
		Ebola	0.8%	217	17
		Any crisis type	23%	5,909	803 activities
		Conflict and war	3.8%	12	9
		Disaster	15.4%	50	25
OCHA FTS	HRI envelopes	Refugees and IDPs	1.2%	4	4
		Ebola	1.6%	5	3
		Any crisis type	20.8%	67	37 flows

^{*}Humanitarian crisis types are not mutually exclusive because a record might mention more than one emergency type.

The disbursements reported to OECD between 2017 and 2020 revealed that official development assistance grants provided more than twice as much funding for conflict and war projects than for disasters, and this was followed by grants addressing refugees and IDPs, and Ebola.

1400 \$1,349.7m 1200 1000 JSD (millions) 800 \$669.9m 600 \$484.1m \$388.4m 400 200 0 Conflict and war Disaster Refugees and IDPs **Fhola**

Figure 9 HRI grant disbursements by humanitarian crisis focus and financial flow type, reported to OECD 2017–2020

Source: OECD CRS

The complexity and diversity of the funding mechanism for research and innovation in the humanitarian sector requires better reporting tools to understand how much funding is being allocated towards emerging humanitarian challenges such as climate change financing and COVID-19.

Although humanitarian needs have increased dramatically in the last few years, the funding of international humanitarian assistance plateaued between 2018 and 2021. Funding from governments and public donors has stalled, reflecting the shift towards combating the impact of COVID-19 on domestic economies.

The analysis of the IATI database shows that less than 0.2% of the overall humanitarian assistance budget between 2017 and 2021 was allocated to address humanitarian issues through research and innovation. This is a slight decrease from the 2015 Deloitte estimate for the humanitarian sector spending on R&D (0.4% of humanitarian spending).

Despite the recognised, evolving role of research and innovation in humanitarian response – and with the continued rise in humanitarian needs and number of countries experiencing protracted crisis – this inquiry argues that the funding for HRI has failed to increase, despite needs continuing to rise. The humanitarian system remains in the bottom list of sectors and industries investing in research and innovation.

With the lack of solid evidence about the value for money, return on investment and, most importantly, the impact of HRI spending on humanitarian outcomes, this report is not arguing to divert resources from operational humanitarian budgets to fund research and innovation in the humanitarian system.

Still, there is a notable gap in our knowledge about the value of HRI investment. Creating better visibility for the value and flows of these investments in the humanitarian system is vital to guiding investment strategies and decisions in the HRI ecosystem.

Chapter 4:

Humanitarian research and innovation funding recipients

CHAPTER 4: HUMANITARIAN RESEARCH AND INNOVATION FUNDING RECIPIENTS

In 2016–2017, we conducted a global mapping exercise of the HRI landscape. In 2021–2022, we commissioned the American University of Beirut to update the findings of that exercise.

The research revealed an increase in the numbers and diversity of a dynamic and growing community of researchers, innovators and funders. With increasing diversity, though, comes an increased risk of duplication of effort and funding, and the potential to under-utilise the already limited available resources.

Thus, this exercise suggests that there is an urgent need to improve our knowledge about the recipients of HRI funding. This will enable better coordination between funders to ensure that resources are targeted to areas and populations with the most pressing needs.

Recipient countries

Our analysis shows different lists of major recipients of HRI funding. Moreover, the top recipient countries were not consistent across the databases we examined.

IATI

- In the HRI-specific funding: most of the recipient country data was missing. In the available data, Yemen received the highest funding of HRI-specific funding reported on IATI (11%), followed by Afghanistan and Sudan, where each received around 3% of the reported funding.
- In the HRI envelope funding category: Lebanon received the biggest funding reported on IATI (17%), followed by Yemen (8%) and Nigeria (5%).

OCHA FTS

- More than half of the funding reported by OCHA FTS funded projects with destination location labelled as 'global'.
- OCHA FTS also has flows with missing destination locations; this category received 17.6% of funding.

The following table shows the list of countries that received the largest proportion of HRI funding in both the IATI and OCHA FTS according to the HRI funding category between 2017–2021.

Table 8 Top recipient countries of HRI funding between 2017 and 2021 by HRI funding category (IATI and OCHA FTS)

ITAI	HRI-specif	ic)	IATI (HRI envelopes)			OCHA FTS (HRI envelopes)		
Recipient country	% of total	Amount \$	Recipient country	% of total	Amount \$	Recipient country	% of total	Amount \$
Unknown	50.3%	248.3m	Lebanon	17.1%	4,386.9m	Global	53.3%	171.5m
Yemen	10.9%	53.6	Unknown	8.4%	2,152.8m	Unknown	17.6%	56.7m
Sudan	3.4%	16.9m	Yemen	6.0%	1,544.4m	Uganda	7.8%	25.0m
Afghanistan	3.4%	16.7m	Nigeria	5.4%	1,384.0m	Somalia	4.0%	13.0m
Ethiopia	2.7%	13.4m	Bangladesh	3.3%	853.7m	Iraq	2.4%	7.7m
Myanmar	2.4%	11.7m	Uganda	3.0%	771.2m	Chad	2.2%	6.9m
ESAR	2.2%	11.1m	Jordan	2.7%	684.2m	DRC	1.8%	5.8m
South Sudan	2.2%	10.7m	Mali	2.7%	699.8m	South Sudan	1.5%	4.8m
Venezuela	2.2%	10.8m	Sudan	2.7%	700.0m	Kenya	1.4%	4.6m
Central African Republic	2.0%	10.1m	Myanmar	2.5%	630.9m	Occupied Palestinian territory	1.1%	3.6m
Other countries*	18.4%	90.8m	Other countries**	46.2%	11,844.7m	Other locations***	6.9%	21.3m
Total	100	494m	Total	100%	27,594m	Total	100%	321.9m

^{*} This group contains 55 countries that received anything less than 1.6% of the total funding.

^{**} This group contains 160 locations that received anything less than 2.3% of the total HRI funding. Some locations are a group of regions or countries (example: Iraq, Jordan, Lebanon, Syria).

^{***} This group contains 26 locations that received anything less than 1% of the total HRI funding. Some locations are a group of countries (example: Bangladesh, Malaysia, Thailand).

There is significant missing data on the geographic coverage of HRI funding. The data cleaning process has also revealed inconsistency in the way the geographic coverage was reported – even within the same database. There is currently no agreed standard or guidelines on how the humanitarian system should report its spending on research and innovation. This report suggests that the humanitarian system needs to have better tools and shared guidelines to report HRI spending to enable better visibility of HRI funding flow.

Funding organisations and destinations

UN OCHA FTS data for 2017 through 2021 shows that funding came from (figure 14):

- 82% from government institutions.
- 16% from EU intergovernmental institutions.
- · Around 2% came from NGOs.
- Each of the other organisation types contributed less than 1% of the overall HRI funding.

The destination organisation type was:

- 62% of the funding went to UN agencies.
- 21% of the funding was allocated to international and local NGOs.
- Around 13% of the funding reached projects with missing organisation types.
- Red Cross/Red Crescent received 2.2% of the funding.
- Government institutions received around 2%.
- The remaining 0.7% was received by academic institutions and the private sector.

The same OCHA FTS database shows how much funding each organisation received from each donor country (figure 15). Our analysis shows that:

- WHO was the organisation receiving the biggest share of HRI, receiving around \$134.9m.
 This represents around 42% of the \$321.9m. (Most of the \$130m funding provided
 by Germany went to WHO in a single flow related to R&D within COVID-19 strategic
 preparedness and response plan.)
- The destination organisation was missing in 13% of the reported funding.
- Save the Children and the United Nations High Commissioner for Refugees (UNHCR) each received around 10% of the funding.
- Other organisations received smaller percentages. The 'other organisations' group contains 51 organisations. Each received anything less than 1% of the total HRI funding reported by OCHA FTS.

The destination country data for HRI funding was missing or reported as 'global' in more than half of the data available on OCHA FTS and IATI. The variation in the source and volume of funding reported across the various data sets is mirrored in allocation patterns to different countries, type of organisation and themes. The available data suggests that HRI funding is both generated and mostly received by actors in high-income countries. Yemen, Afghanistan and Sudan were the top three countries where HRI projects were implemented.

Figure 14 Flow of funding by source and destination type of organisation (OCHA FTS)

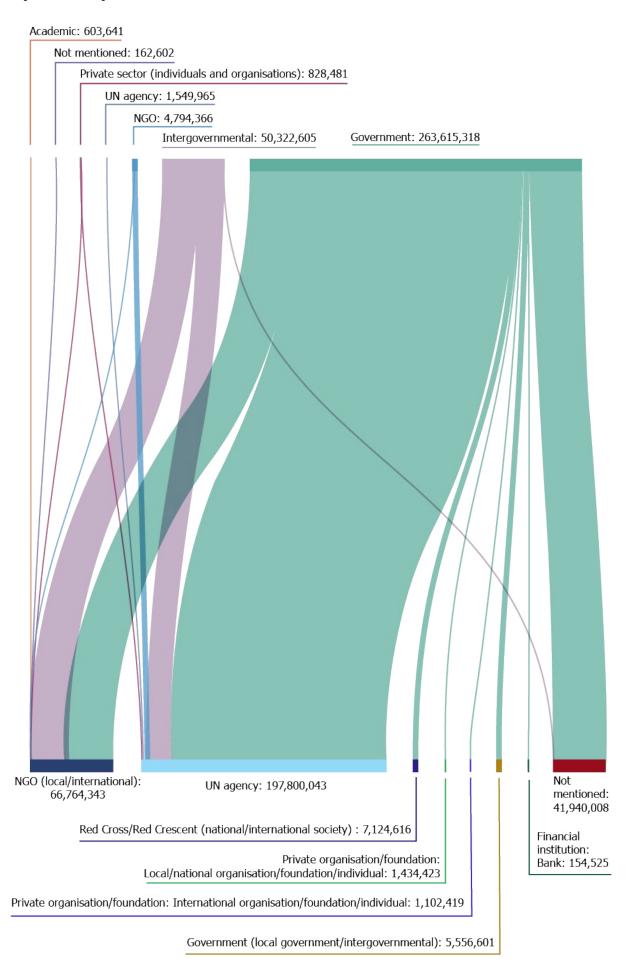
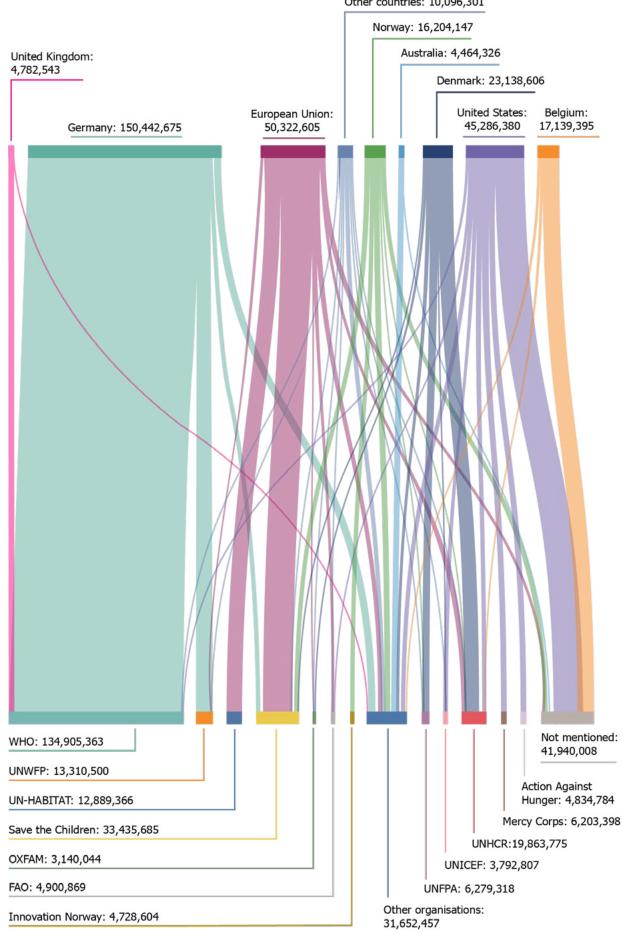


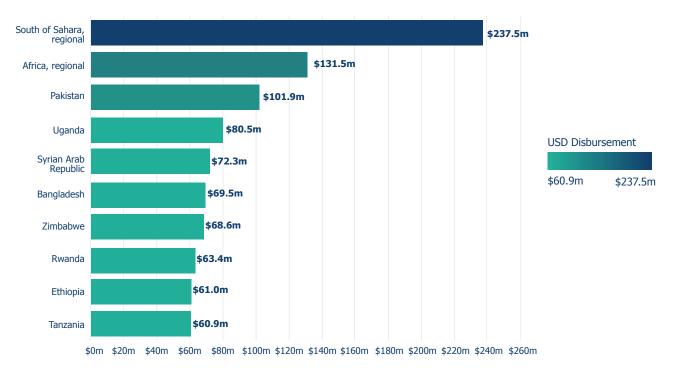
Figure 15 HRI financial flows from the source location to the destination organisation (OCHA FTS)

Other countries: 10,096,301



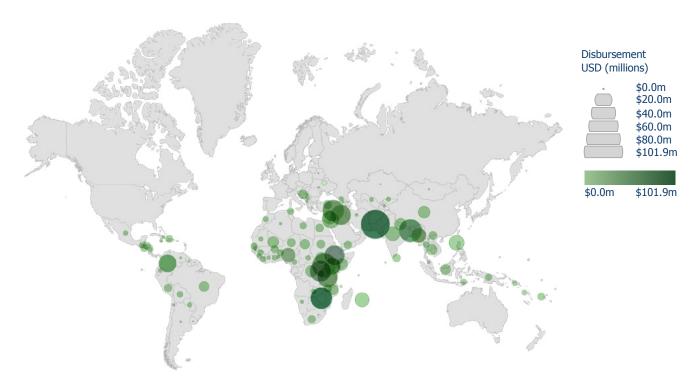
After removing \$809m in unspecified bilateral disbursements reported to OECD from 2017–2020, the top three recipients were regional funding to sub-Saharan Africa, followed by the Africa region overall and then the Syrian Arab Republic (figure 16). The top ten recipients were all in the Africa and Middle East regions. All recipient countries are shown in figure 17.

Figure 16 Top ten specified recipients of HRI funding, reported to OECD, 2017-2020



Source: OECD CRS

Figure 17 HRI disbursements, by recipient country, reported to OECD, 2017–2020



Source: OECD CRS

Funding flows to local actors — EU Horizon 2020 programme

Increasing the direct funding to local actors has been a priority for the humanitarian system since the Grand Bargain in 2016. This report used the type and location of organisation receiving the funding as a proxy measure to assess the volume of HRI funding directed to local actors.

Some recipients of project funding for HRI are located in crisis-affected regions, but the majority are located at a distance from humanitarian crisis events.

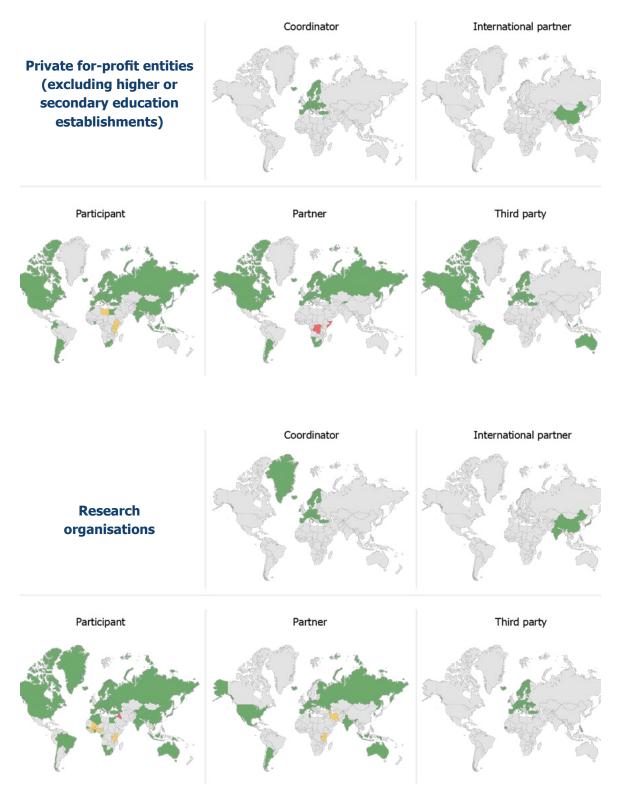
The Horizon 2020 programme data has information on all organisational members of awarded project teams or consortia. As shown in the small multiple maps on figure 18, the coordinator role on humanitarian research projects tends to be taken by an organisation in the European Union, while international partners and third parties tend to be based in the US, Japan, New Zealand, China, Brazil, Russia, Mexico or India.

The global diversity of organisations funded within Horizon 2020 humanitarian research projects is most noted among the partners and participants. Some of these are even located in fragile and extremely fragile states — whether research organisations, academic institutions, governments or private sector companies.

HRI grants and fellowships are largely made to individuals or teams affiliated with an academic institution in a high-income country. But among funding recipients, there are hundreds of academic institutions and nongovernmental entities – such as think tanks and civil society organisations in low and middle-income countries – with some in extremely fragile or fragile states.

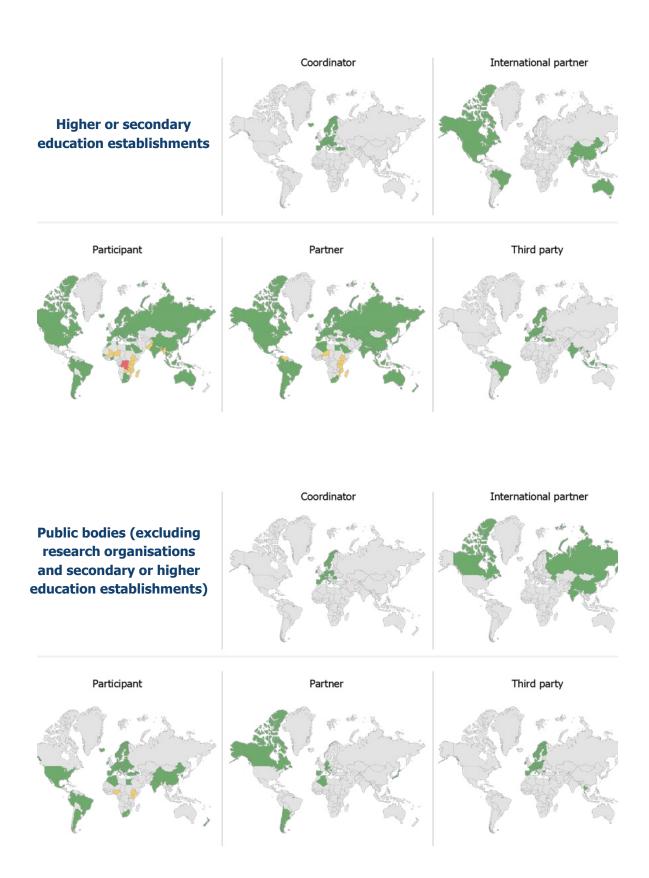
Leadership roles in HRI grant-funded projects tend to be taken by individuals based at institutions located in high-income countries, with few exceptions.

Figure 18 EU Horizon 2020 programme HRI organisations, by role, activity type, country and country fragility level



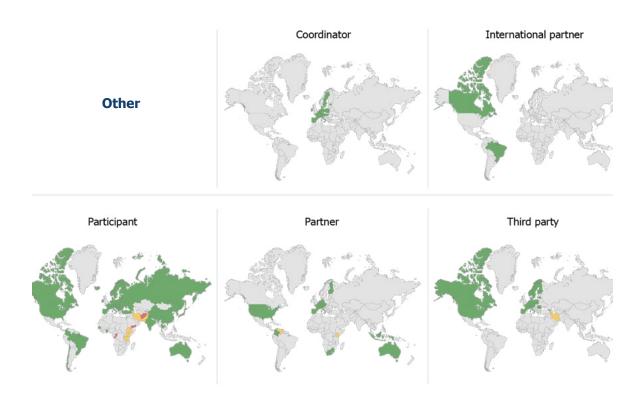
Source of Horizon 2020 programme organisation: EU Community Research and Development Information Service (CORDIS) Source of country fragility levels: OECD

Fragility level Extremely fragile Fragile Not fragile



Source of Horizon 2020 programme organisation: EU Community Research and Development Information Service (CORDIS) Source of country fragility levels: OECD

Fragility level Extremely fragile Fragile Not fragile



Source of Horizon 2020 programme organisation: EU Community Research and Development Information Service (CORDIS) Source of country fragility levels: OECD



Chapter 5:

Conclusion and recommendations

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

Given the growing numbers of countries experiencing humanitarian crises, the pressure is increasing on the humanitarian system not only to respond to humanitarian needs, but also prevent new countries from going into severe crises.

Research and innovation could be valuable assets to strengthen the capacity of the humanitarian actors around the world.

Strengthening the HRI ecosystem requires addressing the lack of common mechanisms that enable coordinating and prioritising research and innovation needs. This, in turn, could support the development of more effective research and innovation strategies.

When research and innovation resources effectively target the most pressing needs, the humanitarian system's ability to identify, mitigate and respond to humanitarian challenges as they emerge could be quickly and substantially increased.

Yet the lack of visibility of real-time needs and investments is hindering the humanitarian system's ability to address funding gaps and align and coordinate investments to where needs are mostly experienced.

This report is one of very few attempts to:

- assess the value of the humanitarian system investments in research and innovation.
- track the source and coverage of investments, creating better visibility in order to facilitate coordination between actors and donors to maximise investment value.

The findings of this exercise lead to the following recommendations:

- Strengthen the funding mechanisms within the HRI ecosystem.
- Support existing local and regional R&I systems and capacities.
- Create accountability for tracking and monitoring HRI investments.
- Build on the approaches used in this report by following our methodological recommendations.

Strengthen the funding mechanisms within the HRI ecosystem

This report reveals that more funding for HRI comes from outside the humanitarian system than from within. Many sectors place research and innovation in a central role in the development and evolution of practice over time. Funding available for HRI was less than 0.2% of the humanitarian budgets in 2017–2021.

This may be indicative of the humanitarian sector's tendency to deprioritise funding for research and innovation, a rational decision to make when there is very limited evidence about the value for money and impact of research and innovation spending, compared to other humanitarian spending.

Our 2018 paper, 'Too tough to scale'*, explored the barriers to scaling. The lack of sustainable funding for innovation was one of the major barriers to scaling and, thereby, supporting innovation to achieve its full potential within the humanitarian system. While this report is not proposing to divert funding from humanitarian operational budgets, the funding community needs to establish a mechanism to share learning on effective and innovative funding approaches or to coordinate efforts to create new higher-impact funding facilities.

Support existing local and regional R&I systems and capacities

Actors routinely left out of mainstream research and innovation policy discussions hold much of the missing knowledge around what works in humanitarian practice, the drivers and catalysts of humanitarian crises and resilience. These actors possess many of the most promising innovations for improving the efficiency and effectiveness of humanitarian aid.

These include governments, national NGOs and research institutions throughout the Global South, practitioners working at field level, private sector actors and, critically, communities affected by crises themselves. There is a clear and pressing need and correlating opportunity to bring these voices into the research and innovation policy conversation through consultation and efforts to increase and promote more equitable visibility.

A concerning trend revealed by the Global Mapping Reports in both 2017 and 2021 and in this exercise is the remarkable disparity between the geographical locations of funding recipients compared to the geographical focus of the research and innovation activities themselves, with most of the research and innovation resources both provided and received by actors in high-income countries. This important finding suggests that more needs to be done to shift funding allocations and decision-making to partners closer to where humanitarian needs are most directly experienced.

Create accountability for tracking and monitoring HRI investments

Major gaps have been identified in the quality of data on the value, source, destination and coverage of HRI. There is a need for a globally agreed framework for monitoring and tracking HRI spending.

Harnessing this framework, stakeholders should agree on the approach, tools and codes to allow tracking of HRI spending, particularly within humanitarian assistance spending.

Agencies reporting data on humanitarian assistance or research and innovation funding can play a crucial role in improving HRI tracking through voluntary reporting and improving project-level data systems. Examples include:

- Agencies submitting funding information on humanitarian assistance to development and humanitarian finance databases should include the word 'humanitarian' in the project title or description when it is a significant part of the project.
- As a significant proportion of projects have missing data about financial flows, there
 is a need to ensure more robust reporting to allow tracking, including flows through
 intermediary agencies. Projects should include the geographic focus of the work.
 Some databases already provide this, while others only include the address of the
 recipient organisations or the primary place of performance, which may be different
 than the geographic focus of the research or innovation work.

Agencies housing funding databases can implement several measures to allow better monitoring of HRI spending. Examples include:

- Apply data validation measures for projects reported in the database to ensure adequate data completeness and usability for analysis.
- Show HRI spending, as a parameter, using the limited data available and issue annual reports on HRI spending. This would encourage reporting agencies to devote more attention to reporting HRI spending so their investments are not 'missed' in global reporting.

Build on the approaches used in this report

These recommendations, found in chapter 6, are directed to those who are interested in improving on this exercise and implementing it on other databases.

Chapter 6:

Methodology and definitions

CHAPTER 6: METHODOLOGY AND DEFINITIONS

Given the different data sources for humanitarian funding compared to financial investments in industry, this inquiry has set out to develop a method for investigating and estimating funding and financial flows to HRI using open data as a novel contribution to the humanitarian financing literature.

As there is no marker for HRI in any of the databases we searched, we first identified HRI projects and funding opportunities through a standard framework, following Pitt et al.^{xv} and Grollman et al.^{xvi}, albeit with a different set of decision rules, since this is a different topic.

Each database had varying fields that cover key research question concepts. Once we identified the HRI projects in each data set, we proceeded to sum their total costs within each database, but never across multiple databases.

As shown throughout this report, while of interest, it is difficult to discern and summarise patterns across sources overall, as well as temporal trends, using the data from each source due to different units of measure, financial indicators and categorical codes.

Data sources and data classification within each source

The table below lists the databases queried, date range, key financial indicators and their interpretation. None of the databases queried were entirely HRI-focused. Some, but not all, data sources had specific categorical codes for identifying a project as humanitarian or identifying a project as research and/or innovation.

If an entire database was considered humanitarian, we did not query to locate humanitarian project funding; rather, we queried for research and/or innovation. Likewise, if an entire database was research and innovation, we did not query to locate research/innovation; rather, we queried for humanitarian projects.

As we are conducting secondary analysis of existing data sources, we first mapped the specific data elements from each database to the project's research questions by referring to online documentation, which included the field definitions. To the extent that they were available, we retained the data elements from each data source in our analysis data sets to respond to the research questions.

We downloaded data sets in flat file format from these sources, opened them in Microsoft Excel and used Tableau Prep Builder, Tableau, IBM SPSS Statistics and ArcGIS Pro to explore, transform, analyse and visualise the data to respond to our research questions.

We classified projects as HRI and within the 2017–2021 date range to comprise our analysis data set from each data source. Across all data sources that were not exclusively humanitarian, we first listed the categorical codes identifying projects as humanitarian. For example, some of the databases that we queried use the OECD sector and purpose codes.

Recommendations

Those embarking on analysis of HRI databases can make further contributions building on the approaches and methods summarised in this report.

- This inquiry has utilised categorical codes and keyword phrases to identify HRI
 spending in humanitarian and development finance, as well as research and
 innovation project award databases. To build on this work, we recommend partnering
 with information specialists and natural language processing experts to better classify
 projects based on text descriptors. We also recommend working with development
 economists to better navigate the changing quantification of aid in various currencies
 along various channels from funders to recipients.
- Interested researchers can further the research presented in this report to identify
 the specific amounts dedicated to HRI in humanitarian assistance projects that have
 HRI components whose proportion or amount is not specified. This requires forensic
 analysis of (at least a sample of) such projects. This research might include a review
 of audited annual reports of funders, interviews with relevant officers of each project's
 lead organisation and interviews with recipient organisations. Such an endeavour
 would allow us to arrive at an actual R&D intensity ratio specific to the humanitarian
 sector.
- This inquiry has analysed a limited number of research and innovation databases
 to identify HRI projects and spending. Researchers are encouraged to assemble
 additional sources to add to those we queried. In particular, an interrogation of
 global, regional and national research and/or innovation databases to estimate the
 amounts dedicated to HRI would complement the information about HRI funding we
 found in the four development assistance, humanitarian assistance, and research and
 innovation funding databases queried for this report.

This analysis is based on open data. Interested parties are encouraged to pursue additional analyses of the data to build upon these findings. There is current interest within the development and humanitarian financing spheres in not only estimating humanitarian research and humanitarian innovation spending, but the return on investment as well. We believe the return on investment should be measured not only from the donor perspective, but at a societal level too, taking into account the benefits accrued to crisis-affected populations.

Database	Entirely humani- tarian	Entirely research and innovation	Study population	Unit of analysis	Time range and date fields	Financial indicator(s) analysed	Interpretation of financial indicator(s) within the 2017–2021 timeframe
OCHA FTS	•		Financial flows that include humanitarian research and/or innovation (HRI) component	Financial flow	2017-2021 (destination usage year)	Amount (USD)	Incoming amounts in USD of humanitarian financial flows 2017–2021
IATI			Budgets of humanitarian activities with research and/ or innovation component	Budget	2017-2021 [budget period start ISO date] and [budget period end ISO date]	Budget value	Amounts in USD of activity budgets which were active during calendar years 2017–2021
OECD CRS			Official development assistance flows and private development finance identified as HRI	Project	2017–2020 (year funding was reported)	Disbursement in USD	Amount in USD disbursed to projects, as reported to OECD in 2017–2020
EU CORDIS		•	EU-funded Horizon 2020 projects identified as HRI	Project	Project start and end date Start date: Keep only dates ≤12/31/2021 End date: Keep only dates ≥ 1/1/2017	Total project funding	Amount in euros of total Horizon 2020 award, all project years, for projects active within the 2017 to 2021 time range

Acronyms and abbreviations

ACRONYMS AND ABBREVIATIONS

HRI	Humanitarian research and innovation
OCHA FTS	United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Financial Tracking Service (FTS)
IATI	International Aid Transparency Initiative (IATI)
OECD CRS	Organisation for Economic Co-operation and Development (OECD) Creditor Reporting System (CRS)
EU CORDIS	European Union Community Research and Development Information Service (EU CORDIS)
ODA	Official development assistance
R&D	Research and development. This refers to activities oriented towards the development and testing of solutions and approaches to humanitarian problems, including innovation activities and empirical research.
R&I	Research and innovation

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The Global Prioritisation Exercise (GPE) aims to improve outcomes for people affected by crisis by amplifying the impact of investments in research and innovation through understanding the priorities at all levels. It will provide an overview of the progress and performance of the humanitarian research and innovation ecosystem with a clear set of priorities for research and innovation funding and attention.

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