CREATING
HOPE
IN CONFLICT:
A HUMANITARIAN GRAND CHALLENGE

ANNUAL
REPORT
2023

Creating Hope in Conflict: A Humanitarian Grand Challenge (CHIC) is a partnership of the U.S. Agency for International Development; the U.K. Foreign, Commonwealth & Development Office; the Ministry of Foreign Affairs of the Netherlands; and Global Affairs Canada, with support from Grand Challenges Canada.

Our goal is to find and accelerate life-saving or life-improving innovations to help the most vulnerable and hardest-to-reach people impacted by humanitarian crises caused by conflict.

Published at the end of our fifth year, this report outlines the portfolio's recent achievements and learnings since our inception and shares our future programmatic outlook.

TABLE OF CONTENTS

A MESSAGE FROM THE DIRECTOR OF HUMANITARIAN INNOVATION

In 2018, **Creating Hope in Conflict: A Humanitarian Grand Challenge**'s (CHIC) founding year, 136 million people needed humanitarian assistance.[1] Five years later, that number has more than doubled to 363 million people in need.[2] Despite growing unmet needs, the humanitarian funding shortfall reached $33 billion this past year.[3] Improvements in global humanitarian aid funding and delivery cannot wait.

For our team here at CHIC, these statistics are deeply personal. More than half of us have roots in the countries experiencing protracted crises. In my home country, Afghanistan, over 29 million people need humanitarian assistance[4] and 5.8 million Afghans are currently displaced.[5]

Over the past five years, we have remained steadfast in our core vision: saving and improving the lives of populations affected by conflict by reducing gaps in humanitarian assistance. We have prioritized locally-led solutions that can contribute towards the humanitarian system becoming more nimble, cost-effective, and most importantly, accountable to conflict-affected communities.

We have partnered with innovators to develop proof of the effectiveness, efficiency, and value of their innovations, providing data to encourage other funders to join us. CHIC funding has been supplemented by over $99 million in complementary third-party investments, signalling innovation uptake for our innovation partners in private, public, and non-profit sectors.

This year has been a year of growth, reflection, and building on our successes. We are transitioning into a new phase of CHIC, with renewed commitments from the U.S. Agency for International Development (USAID), confirmed for the next three years, as well as ongoing support from our other partners, the U.K. Foreign, Commonwealth & Development Office (FCDO), the Ministry of Foreign Affairs of the Netherlands, and

Global Affairs Canada. We engaged Triple Line Consulting to conduct an independent evaluation of the efficacy of the CHIC program, enabling us to reflect deeply on our existing strengths and mark areas for improvement. We leveraged our years of learnings to develop an Innovation Adoption Strategy, which will inform our mapping and convening of humanitarian-sector stakeholders that are well-positioned to adopt CHIC-funded innovations and support scaling efforts. We have also begun thoughtfully growing our team and portfolio further as we increase the scale of our impact over the next five years.

As we move into the next phase of our program—with a keen focus on scale, sustainability, and impact in the humanitarian system—CHIC will continue prioritizing localization, innovation adoption in the humanitarian sector, and promotion of an ecosystem of innovators working collaboratively to solve some of the most pressing humanitarian challenges.

The achievements and growth of the past five years, and the effect on the lives of many people in conflict-affected humanitarian settings, would not have been possible without our collaborators. On behalf of the entire CHIC team, I would like to extend a warm thank you to our partners—the U.S. Agency for International Development, the U.K. Foreign, Commonwealth & Development Office; the Ministry of Foreign Affairs of the Netherlands; and Global Affairs Canada—as well as our home, Grand Challenges Canada. We look forward to many years of enabling bold, impactful humanitarian innovation.

Fawad Akbari, MD, MPH
Director, Humanitarian Innovation

WHO WE ARE

363 million people
need humanitarian assistance

108.4 million people
were displaced by conflict and persecution in 2022[6]

US $33 billion
humanitarian funding shortfall

Today, 363 million people[7] need humanitarian assistance, and millions of them remain unreachable by traditional humanitarian aid delivery due to armed conflict. As the length, frequency, and complexity of conflicts increase, it is becoming more and more difficult to reach affected people in insecure areas with humanitarian assistance. We need new solutions that respond to the needs of vulnerable, inaccessible communities, yet less than one percent of humanitarian aid is focused on investing in the innovations necessary to reach them.

Creating Hope in Conflict: A Humanitarian Grand Challenge (CHIC) is the first innovation challenge to focus on humanitarian crises caused by conflict. Launched in 2018, CHIC partners collectively contributed USD $38 million to enable humanitarian actors and agencies, local emergency responders, and the private sector to work alongside affected communities to respond more nimbly to complex humanitarian emergencies. In 2023, with renewed commitments from the U.S. Agency for International Development confirmed for the next three years, and ongoing support from the U.K. Foreign, Commonwealth & Development Office, Netherlands Ministry of Foreign Affairs, and Global Affairs Canada, we are excited to enter the second phase of the CHIC program.

HOW WE WORK

We are an **impact-first** innovation funder.

We identify and accelerate innovations that apply new insights, technologies, and approaches to improve—and in many cases, save—the lives of the most vulnerable and hardest-to-reach people in humanitarian crises caused by conflict. Alongside our funding, we offer tailored support and resources to enable innovation in humanitarian settings and gather robust evidence for the effectiveness and impact of the innovations in our portfolio.

PROVIDING FLEXIBLE, CATALYTIC FUNDING

To address global underinvestment in humanitarian aid innovation and locally-led solutions closest to affected communities, we fund early and mid-stage innovations addressing the globe's most pressing humanitarian needs. Our seed program supports the validation and testing of new approaches with grants of up to $250,000. Our transition-to-scale program funds grants of up to $1.5 million for the refining and implementing of solutions that have successfully achieved proof-of-concept.

FOSTERING COLLABORATION

The humanitarian innovation ecosystem not only suffers from funding gaps, but also needs more investment in the mechanisms required to support the scale-up needs of innovators.[8] To help bridge this gap and better meet the needs of innovators, we offer support to accelerate their advancement towards impact and scale. Through our innovator support platform, we provide access to a network of peers, mentors, and experts to learn from and work with, fostering a community for change. We also support innovators to form critical partnerships and collaborations with humanitarian stakeholders.
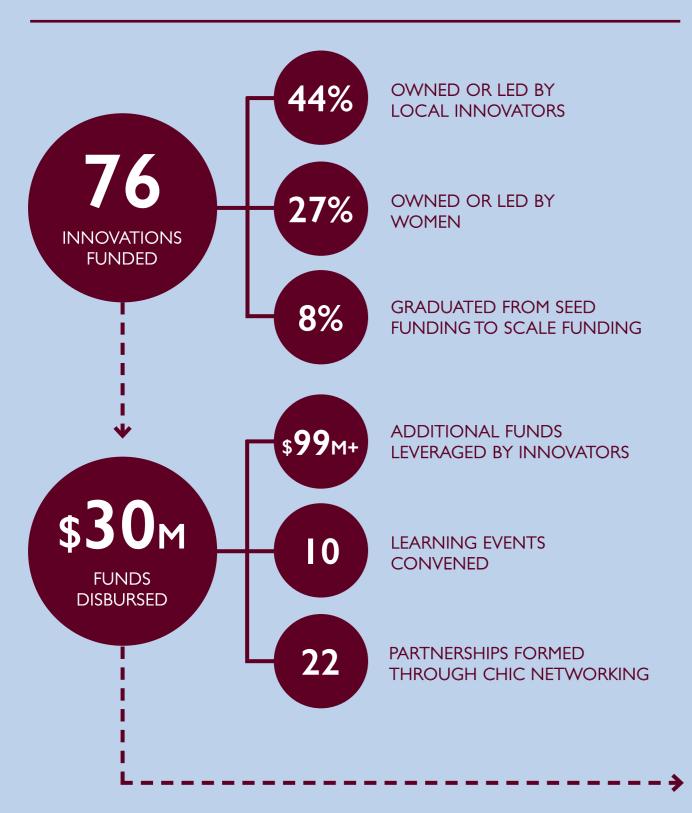
SUPPORTING LOCALLY LED SOLUTIONS

People living in conflict zones and those directly affected by conflict—local responders—possess the knowledge and connections to best address their acute humanitarian challenges. Yet, as of 2022, only 1.2% of funding directly reached local and national responders.[9] CHIC is committed to shifting power and resources to local solvers and responders. Our efforts to support locally driven innovation have resulted in 44% of all CHIC-funded innovations being led or owned by conflict-affected community members. More work is still needed to ensure that local responders are leading humanitarian efforts. We remain committed to driving this change.

UNLOCKING CHANNELS TO ADOPTION

We work closely with innovators to develop the necessary evidence to advocate for investment in innovation in the humanitarian sector. We facilitate connections with humanitarian stakeholders and institutions to encourage the wider adoption of promising innovations across the sector. Creating channels for innovation adoption within large humanitarian agencies can be a precursor to influencing systems-level shifts or changes within the sector.

OUR IMPACT

76 INNOVATIONS FUNDED

- **44%** OWNED OR LED BY LOCAL INNOVATORS
- **27%** OWNED OR LED BY WOMEN
- **8%** GRADUATED FROM SEED FUNDING TO SCALE FUNDING

$30M FUNDS DISBURSED

- **$99M+** ADDITIONAL FUNDS LEVERAGED BY INNOVATORS
- **10** LEARNING EVENTS CONVENED
- **22** PARTNERSHIPS FORMED THROUGH CHIC NETWORKING

3,502,546 PEOPLE WITH ACCESS TO INNOVATIONS

297,254 LIVES IMPROVED THROUGH USE OF INNOVATIONS

15 SYRIA

5 BANGLADESH

10 YEMEN

10 SOUTH SUDAN

6 KENYA

11 DEMOCRATIC REPUBLIC OF THE CONGO

8 UGANDA

RECOGNIZING WOMEN-LED AND LOCALLY-LED INNOVATIONS:

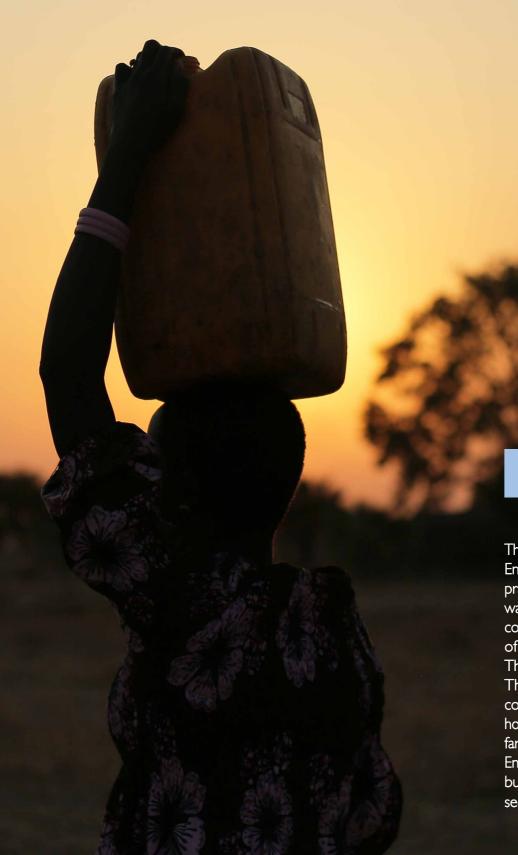## THE SYSTEMIC HUMANITARIAN INNOVATION FOR TRANSFORMATION PRIZE (SHIFT)

USAID and CHIC developed the SHIFT prize in response to the historic underinvestment in women-led and locally-owned innovations. The prize awards innovations in our portfolio that apply systems-thinking and systems-acting in their work, while engaging stakeholders to co-develop solutions and shape the local systems around the complex problems they seek to solve.

GRAND PRIZE WINNER: $100,000

SEHAT KAHANI

Sehat Kahani is a telemedicine platform that democratizes healthcare for Afghan refugees and the growing population of 5.3 million internally displaced persons in northwest Pakistan, while circumventing barriers to employment for female medical professionals. The holistic solution consists of a mobile application, a 24/7 helpline, and nurse-assisted e-clinics for those without internet connectivity. The virtual health platform addresses disparities in healthcare for conflict-affected and host communities in Pakistan, and remotely employs female physicians. Sehat Kahani represents a breakthrough in overcoming Pakistan's sociopolitical barriers impeding equitable female representation in the medical workforce.

Following an application process, a review and an approval by a consensus-based judging panel, Sehat Kahani won the SHIFT grand prize of USD $100,000. Sehat Kahani has fostered community-based and government-enabled partnership linkages to convert underused health facilities to better support Afghan refugees accessing Sehat Kahani e-clinics, explored industry partnerships to integrate their mobile app into wider ecosystems, and increased sensitization towards vital health disparities to reduce the burden on the economy and improve overall health status.

RUNNER UP: $80,000

RAINMAKER ENTERPRISE

The SHIFT Prize runner-up was awarded to Rainmaker Enterprise, a local pioneer of regenerative agricultural practices. Rainmaker Enterprise installs solar-powered water infrastructure in South Sudan, one of the worst countries affected by climate change, where over half of the population is struggling with food insecurity. Their first solar-powered water system, installed in Thiet, Tonj South, supplies 2,000 conflict-affected community members with access to clean water for household and productive use, and provides 40 acres of farmland with drip-irrigation water systems. Rainmaker Enterprise's model is underpinned by deep community buy-in and collective responsibility to ensure water security and the protection of community resources.

INNOVATOR HIGHLIGHTS

CHIC funding and support enables innovators to pilot novel technologies and approaches in the most complex crisis settings; deepen their impact; establish new partnerships; and catalyze additional funding and investment. Here are a few of our key moments from CHIC-funded innovators this past year.

INNOVATOR GROWTH AND PARTNERSHIPS

Following CHIC's initial investment, CHIC-funded innovators have expanded the scope of their work and partnered with governments and international organizations to deepen their impact.

NOV 2022

SURGIBOX INC.

UKRAINE

SurgiBox's CHIC-supported technology SurgiField, an ultraportable, sterile surgery system, has been deployed under humanitarian use exemption in Ukraine during the current conflict, at the request of the Government of Ukraine and of multiple organizations on the ground, advancing the innovator's goals of supporting safe surgery at the point of need.
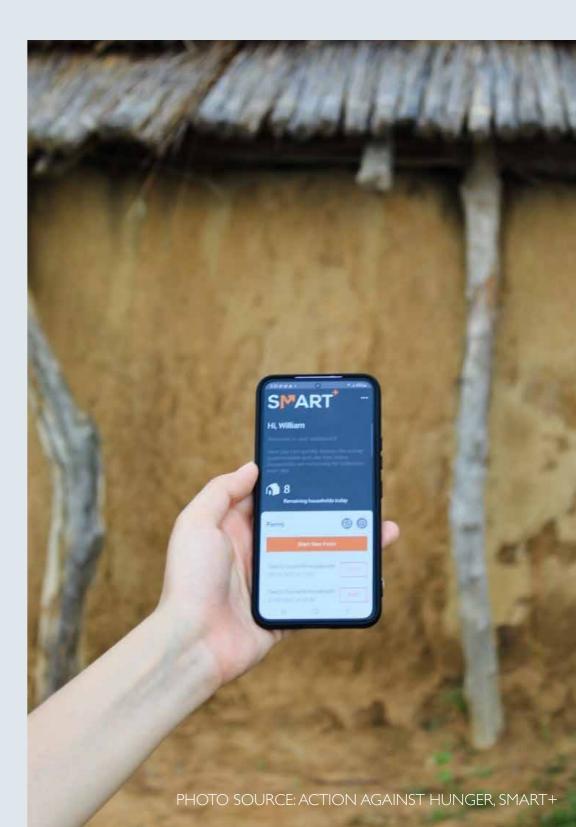
APR 2023

SMART+

KENYA

The SMART Initiative hosted by Action Against Hunger Canada launched SMART+, an all-in-one digital infrastructure, in a joint event with the Government of Kenya. SMART+ is designed to revolutionize how nutrition data is collected, analyzed and shared to allow governments, public health organizations, and non-governmental organizations (NGOs) to better identify and target malnutrition. Results from SMART+ are publicly accessible through their aggregator and dashboard.

MAY 2023

ENERGY PEACE PARTNERS

SOUTH SUDAN

Energy Peace Partners collaborated with the International Organization for Migration (IOM) to issue Peace Renewable Energy Credits (P-RECs) from an IOM-run solar project in Malakal, South Sudan. The transaction was facilitated by 3Degrees and the P-RECs were purchased by Block, funding solar electrification for Bor State Hospital in South Sudan. This builds on a 2022 P-REC transaction with the same partners that funded solar electrification for Malakal Teaching Hospital.

MAY 2023

PRADO POWER

NIGERIA

Following the completion of a CHIC-funded seed grant, Prado—a solar energy provider—commissioned a new 350KW solar mini-grid project in Chito, a rural community in Benue State (Nigeria), as part of the World Bank and Rural Electrification Agency Nigeria Electrification initiative. Their aim is to provide over 7,000 new electricity connections to businesses and households, as well as first-time energy access to over 38,000 people.

TRANSITION TO SCALE FUNDING

Our transition-to-scale (TTS) funding supports promising innovations with proven impact to progress towards scale and sustainability. Six CHIC-funded early-stage seed innovations graduated to TTS funding and one new project was introduced into the TTS portfolio. To learn more about our seed to TTS graduations, check out our Seed Stories blog series.
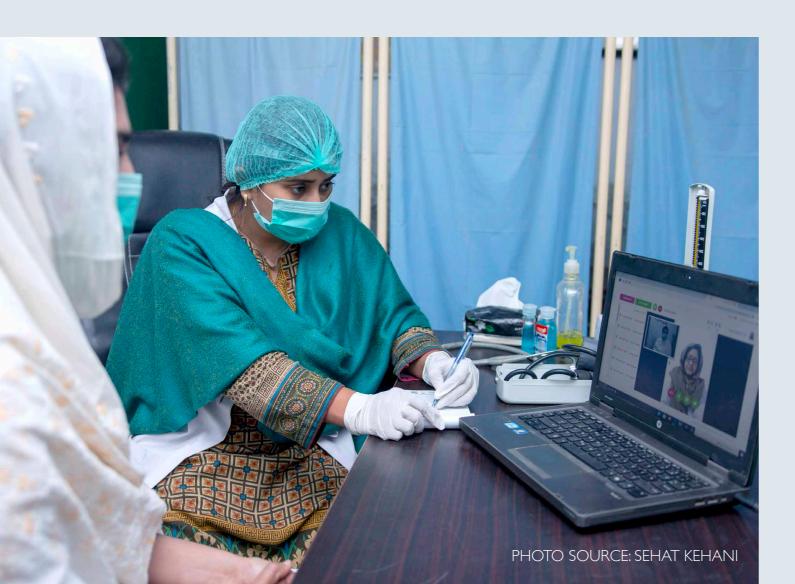
SEHAT KAHANI

Sehat Kahani is a telemedicine solution aiming to democratize healthcare access in conflict-affected communities. CHIC granted them an additional $750,000 in TTS funding to support a proposed expansion of services across 25 e-clinics in underserved refugee communities in Pakistan. The funds will also be used to implement technical upgrades to their software and mobile application to include language translation, e-pharmacy and clinical modules, and referral to specialized services.

$750,000
TTS FUNDING

25
E-CLINICS

PHOTO SOURCE: SEHAT KEHANI

SPEETAR

A new addition to CHIC's portfolio, Speetar is an inclusive digital health ecosystem providing accessible, affordable, language/culture-matched, quality healthcare in conflict-affected countries. Speetar offers a safer, practical means of seeking healthcare and increases the overall efficiency of Libya's healthcare system. With TTS funding, Speetar will deepen its impact on the ground and establish e-health clinics or "Health Dots" that target over 30,000 patients in rural and marginalized communities in Libya.

$300,000
TTS FUNDING

30,000
NEW PATIENTS

PRAGMATIC INNOVATION

During the seed stage, Pragmatic Innovation conducted further validation and refined PragmaVAC, a manual negative pressure device intended to speed up wound healing in low-resource settings. Following positive results, Pragmatic Innovation was awarded TTS funding to expand its client base in northwest Syria, Palestine, and Yemen, proposing to improve the lives of over 3,000 individuals with more efficient and effective wound care treatment.

$300,000
TTS FUNDING

3,000
LIVES IMPROVED

ENERGY PEACE PARTNERS

Following a successful CHIC-funded seed round and growing corporate demand, Energy Peace Partners has advanced to TTS graduation funding. They will further the Peace Renewable Energy Credit as a recognized and established instrument for renewable energy credit transactions in fragile and energy-poor contexts that otherwise lack incentives for investment. With follow-on TTS funding, Energy Peace Partners aims to execute eight P-REC transactions totaling USD $1.5M, and expand government authorizations and onboard seven new P-REC buyers.

$300,000
TTS FUNDING

7
NEW BUYERS

YORK UNIVERSITY

During its seed round, York University refined the Safe Water Optimization Tool (SWOT) and carried out field testing in three displaced persons camps in Nigeria which showed that the tool can help ensure water safety at the point-of-consumption in refugee and IDP camps. Following promising results, follow-on TTS funding was awarded to deploy the innovation in three new sites and pilot the SWOT as a national-level cluster coordination tool for the water, sanitation, and hygiene (WASH) sector.

$300,000
TTS FUNDING

3
NEW TEST SITES

TRANSITION TO SCALE SPOTLIGHT
HAND IN HAND FOR AID AND DEVELOPMENT

$300,000
TTS FUNDING

430
PEOPLE REACHED WITH PROSTHETICS AND ORTHOTICS

THE CHALLENGE

The ongoing conflict in Syria has caused widespread physical injuries, resulting in many individuals with long-term mobility impairments and amputations, particularly in the northwest region of the country. Despite the high need for prosthetics and orthoses, there has been a lack of localized, cost-effective, and sustainable methods of device production. Not only have people with disabilities been unable to access assistive devices, but mental and physical rehabilitation services have been inadequate to meet the complex psychosocial support needs of trauma-affected individuals.

THE INNOVATION

With seed funding from CHIC, Hand in Hand for Aid and Development (HiHFAD) tested a novel model of localized prosthetic and orthosis production, employing 100% Syrian staff and locally procured resources, equipment, and materials for manufacturing and maintenance. Funds were also invested in three comprehensive rehabilitation centres and over 6 mobile units in the area, allowing HiHFAD to become the leading provider of physical and mental rehabilitation services, assistive devices, and prosthetics and orthotics in the region.

THE IMPACT

The seed phase demonstrated the potential for profound and sustained impact for some of the most vulnerable subsets of an already vulnerable and conflict-affected community, such as child amputees or young adults who, after regaining access to prosthetic limbs, could play sports again or re-contribute to livelihood activities. By the end of the CHIC grant period, HiHFAD provided 430 people with access to locally manufactured prosthetic and orthotic devices. Not only did this enhance the lives, employment prospects, and resilience of individuals with mobility impairments, but it also reduced the cost and time of prosthetic and orthotic procurement by 35% and 40%, respectively. Given these promising results, CHIC has committed TTS funding to HiHFAD to support the further expansion of its operations and prosthetic and orthosis production sites in northwest Syria.

PHOTO SOURCE: HAND IN HAND FOR AID AND DEVELOPMENT

ADDITIONAL FUNDS LEVERAGED

CHIC-funded innovators collectively secured an additional $99 million in new investments to support innovations scaling efforts.

SPOTLIGHT
MANDULIS ENERGY LTD.

$ €349,000
IN ADDITIONAL FUNDING

In 2020, CHIC supported the vision of Mandulis Energy, a budding renewable energy company that promised to address the lack of clean, affordable, and sustainable energy sources for people in refugee resettlements and host communities in Uganda. Since then, Mandulis secured €349,000 in grant funding from the Dutch Fund for Climate and Development (DFCD) to scale up their project facilitating the conversion of agricultural processing residues into clean energy and organic fertilizer to six additional sites in Western Uganda.

As part of its Sustainable Energy Powering Agriculture & Refugee Livelihoods Enhancement (SEPARLE) initiative, Mandulis designed and manufactured a briquette-making machine that converts agricultural processing residues into clean, non-carbonized briquettes for cooking. The company also created an affordable clean gasifier cookstove that, alongside the briquettes, has distributed to families across the refugee hosting districts and refugee settlements in Uganda, and provided farmers with training.

7,941 people accessed high-quality, clean briquettes at below the price of charcoal or firewood

307 farmers accessed weekly milling services and their average monthly income increased by 149%

3,046 individuals received additional sources of income through selling carbonised residues or launching and expanding retail businesses

2,561 tons in CO_2 emissions reduced through the sale and production of 79,470 kg of briquettes over the course of the CHIC funding period

NEEDSLIST

Needslist–an online marketplace to match humanitarian needs with supplies–secured USD $1 million from Google.org to contract a team of engineers to build and scale a free, public version of their crisis response software for Ukraine response efforts, which now incorporates artificial intelligence (AI) solutions, cloud optimization, and multilingual support.

$ $1 MILLION
IN ADDITIONAL FUNDING

ALTECH GROUP

Altech raised USD $18 million in debt financing and grants to expand access to energy across the Democratic Republic of Congo (DRC). The funds will enable the Altech Group to open more than 30 new sales outlets in rural areas and distribute 180,000 solar products to extend clean, reliable energy access to another 900,000 people.

$ $18 MILLION
IN ADDITIONAL FUNDING

NURU

Nuru–a renewable energy provider–secured $40 million in funds from market-leading equity investors to commence construction of new solar energy projects in the Democratic Republic of Congo (DRC), which will significantly expand its existing operating assets in eastern DRC and help bridge the significant energy gap in the country.

$ $40 MILLION USD
IN ADDITIONAL FUNDING

FIVE YEARS IN: KEY LESSONS LEARNED

MOVING RESOURCES CLOSER TO THE CRISIS: LOCALIZING HUMANITARIAN INNOVATION

Global humanitarian emergencies continue to reinforce the importance of local humanitarian responders who can effectively and immediately address urgent needs at the onset of a crisis.

Humanitarian actors from high-income countries, if committed to effective aid delivery, need to increase efforts to engage meaningfully with affected communities and provide sufficient direct funding to local responders. At Creating Hope in Conflict: A Humanitarian Grand Challenge (CHIC), a driving force of our portfolio is supporting locally-led solutions to improve humanitarian responses for hard-to-reach and conflict-affected communities. Since 2018, 44% of our funded innovations are either led or owned by conflict-affected community members,[10] with the majority being implemented in northwest Syria, the Democratic Republic of Congo (DRC), Yemen, Nigeria, and South Sudan. This section highlights a few key trends and lessons that are emerging from the portfolio.

I — Local innovators are well placed to identify local needs and existing capacities

Local innovators have a **deep contextual understanding** of humanitarian crises, particularly as they are situated in the affected community. Through their **personalized experiences, intimate knowledge of the community and connection to relevant local actors**, they are acutely aware of the existing challenges and the critical solutions needed to create sustainable change.
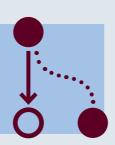
WHITE HELMETS

White Helmets—a TTS grantee—were funded to manufacture personal protective equipment in northwest Syria at the height of the COVID-19 pandemic. As a local responder from the community itself, their existing presence, reputation, trust-based relationships and deep understanding of the ongoing conflict dynamics and community needs enabled them to understand a) the local demand for PPE among health workers, b) complex supply chain constraints affecting the region, and c) the existing capacities available to support their efforts. By the end of the grant, the White Helmets were able to repurpose an underutilized garment factory to manufacture 10 million masks, 96,095 medical protective gowns, 189,700 face shields and 1,890 body bags. In addition, over 101,000 kg of medical waste was safely disposed of using medical waste incinerators.

SOLAR FREEZE

Solar Freeze, a Kenya-based company providing pay-as-you-store solar-powered refrigeration services in refugee camps, identified and trained a cohort of youth technicians to repair and maintain the solar units, enabling them to gain the requisite skills needed to service the community and access livelihood opportunities.

2 — Operating in active conflict zones comes with unique challenges that require agile planning, donor adaptability and flexibility

Within conflict settings, innovators face various challenges, specifically those around **managing sensitive political relationships and socio-political tensions** that can significantly complicate, delay, or derail project implementation. International sanctions on Syria resulted in a disconnected financial system, which caused delays in implementation and even impacted CHIC's ability to deliver timely funds to local innovators operating in northwest Syria. The knock-on effect meant that innovators did not always have materials or funds available when needed, resulting in project setbacks and delays in implementation, necessitating many no-cost extensions.

UOSSM

Union Internationale des Organisations de Secours et Soins Medicaux (UOSSM), who sought to procure a battery powered electric ambulance to Syria, faced numerous unsuccessful attempts to deliver the vehicle. COVID-19 caused logistical delays, coupled with difficulty finding a supplier with the necessary approvals, and exemptions needed to procure the item into an active conflict zone. Following the provision of a no-cost extension, UOSSM was eventually able to complete their grant milestones and establish a more reliable and environmentally sustainable model to transport vaccines from cold rooms to primary health facilities. By June 2022, over 38,000 people benefitted from the delivery of Covid-19 vaccines through the electric ambulance.

ALTECH

Alternative Energy Technologies Group (Altech) – a solar energy company in the Democratic Republic of Congo founded by former refugees – provides solar products through an affordable PayGo model in eleven UNHCR identified refugee and IDP zones. The team experienced implementation delays due to escalated violence in the region, forcing an evacuation of the sales team and products from the eastern region. The ongoing conflict dynamics have also resulted in damaged infrastructure including roads and telecoms. Despite ongoing instability, Altech has developed a robust contingency plan for such emergencies and continues to make progress on their sales milestones, having now sold 15% of its projected products and opened 50% of its projected sales kiosks.

3 — Government fragmentation and instability in conflict settings complicate public and private sector scaling pathways

In more stable settings, government engagement and uptake are often a critical lifeline for innovation scaling efforts and the private sector has the potential to unlock additional opportunities. In active conflict settings, however, **government institutions and/or local authorities may be unable or unwilling to engage, fragmented or even non-existent**. Private sector channels, such as commercialization, may not be viable, further complicating innovation scale and sustainability efforts. Many local organizations operating in these contexts may need to **explore alternative pathways to scale** and may continue to be dependent on grant funding.

HAND IN HAND FOR AID AND DEVELOPMENT

Hand in Hand for Aid and Development (HIHFAD) is focusing efforts on creating sustainable operations for its existing prosthetics and orthotics clinic, after which it intends to scale the initiative to multiple regions and clinics after attaining unit-level sustainability. In the absence of a functioning health ministry able to advance scale efforts in northwest Syria, HIHFAD's scale up plans are centered around building an evidence base for their innovation and growing a skilled workforce of prosthetic technicians, which would enable them to include the innovative approach into HIHFAD's larger grant-based fundraising efforts.

YEMEN RELIEF AND RECONSTRUCTION FOUNDATION

Yemen Relief and Reconstruction Foundation (YRRF) has developed a novel and compact solar-powered water purification system that aims to provide hard-to-reach communities in Yemen with access to clean and drinkable water. However, the conflict dynamics in Yemen, characterized by a fragmented political system across regions, have complicated YRRF's ability to transport and implement the water purification system in Yemen, thereby significantly delaying project implementation and subsequent scaling efforts.

CHIC remains committed to providing flexible funding tools to invest in locally-driven solutions. While each context may present unique challenges, the emerging lessons collectively highlight the importance of leveraging local actors who are well equipped to tackle emergent and inevitable challenges in some of the most complex settings. Although factors such as fluid conflict dynamics, international sanctions and government fragmentation may complicate implementation efforts, local innovators demonstrate resiliency and a profound ability to overcome significant setbacks.
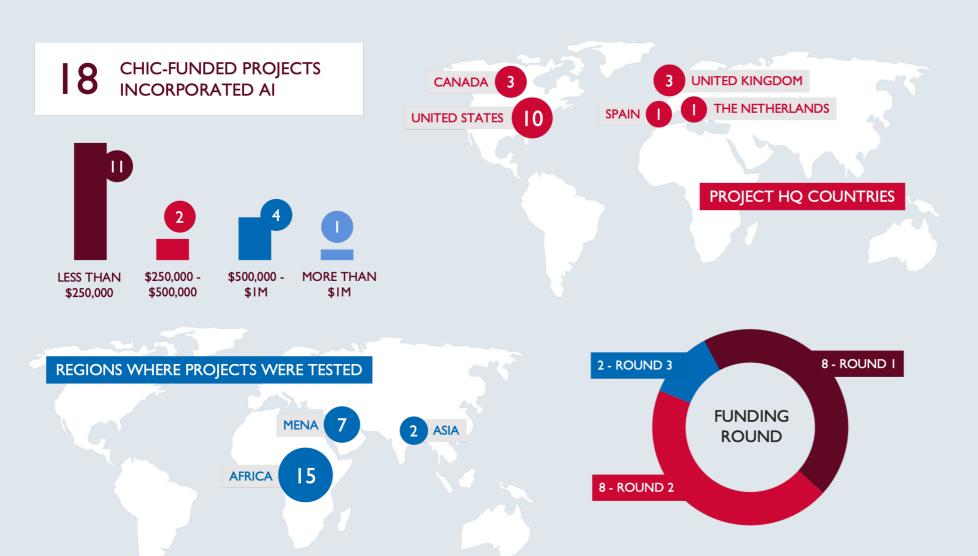
TESTING NEW APPROACHES: INTEGRATING ARTIFICIAL INTELLIGENCE INTO HUMANITARIAN RESPONSE EFFORTS
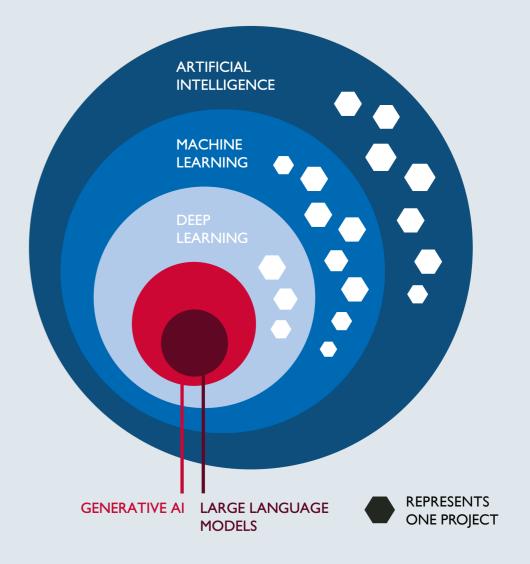
Amongst humanitarians, enthusiasm for AI's potential contrasts with caution about unknown risks.[11] CHIC has already funded 18 projects that incorporated the use of AI in their proposals. We reviewed these projects to see what we could learn from them and the implications for our future funding. A discussion on the implications of current AI developments is available in our full report.

The projects were delivered over 12-24 months at the height of the COVID-19 pandemic, between March 2019 and March 2023. They represent almost 30% of all CHIC funding. Eleven of the projects received seed funding of approximately $250,000, while a further seven received 'transition to scale' (TTS) funding of up to $1.7M. The projects were divided across the three traditional AI domains of image processing, natural language processing (NLP), and forecasting.

The majority of projects were based on machine learning or classical AI methods (or did not specify their methods[12]). Three projects included deep learning[13] methods. The projects took place before modern foundation or generative models came to market, such as large language models (LLMs) like ChatGPT or Google's Bard, so there were no examples employing these technologies.

Against the AI component of their original proposals, two of the projects achieved a very high degree of success, and seven a high degree of success. Around half did not achieve their AI objectives or had a low degree of success. In practice, AI tended to be a stretch objective for many teams, which was only attempted after the core (non-AI) requirements of the project were met.

18 CHIC-FUNDED PROJECTS INCORPORATED AI

11 — LESS THAN $250,000
2 — $250,000 - $500,000
4 — $500,000 - $1M
1 — MORE THAN $1M

REGIONS WHERE PROJECTS WERE TESTED

MENA 7
ASIA 2
AFRICA 15

CANADA 3
UNITED STATES 10
UNITED KINGDOM 3
SPAIN 1
THE NETHERLANDS 1

PROJECT HQ COUNTRIES

FUNDING ROUND
2 - ROUND 3
8 - ROUND 1
8 - ROUND 2

ARTIFICIAL INTELLIGENCE
MACHINE LEARNING
DEEP LEARNING
GENERATIVE AI
LARGE LANGUAGE MODELS

⬡ REPRESENTS ONE PROJECT

We found four common lessons related to AI across the CHIC-funded projects:

1 Have a data strategy and devote a significant proportion of available resources to it

Insufficient access to high-quality data was the primary challenge to achieving AI goals. Recognized as a linchpin for AI endeavors, data serves as the foundation for learning and predictions in AI algorithms. The accuracy and efficacy of AI models depend on the quality and quantity of available data. Various issues were encountered, ranging from difficulties in gathering pertinent training data in minority languages to a dearth of publicly accessible mapping data, compartmentalized supply chain information, and hurdles in collaborative data capture efforts with partner organizations. Acknowledging that data plays a central role, future projects should prioritize the following considerations:

- **Develop a data strategy** to systematically plan ways to avoid data pitfalls
- Prioritize **investment in data** before AI systems
- **Use or develop open standards for data management**, allowing teams to more easily share data across multiple projects.
- **Plan collaborations with data gatekeepers** (often on-the-ground organizations) at all stages of the AI development cycle[15] and improve the transparency and explainability of AI systems.

2 Include appropriate AI and data-science skilled professionals in project teams

The success of projects hinged on the composition of teams, which needed to possess technical proficiency and data skills. In future rounds, CHIC should gather more information on the technologies in question and the competencies of the teams involved. It could then consider how to better support projects through access to complementary technical expertise.

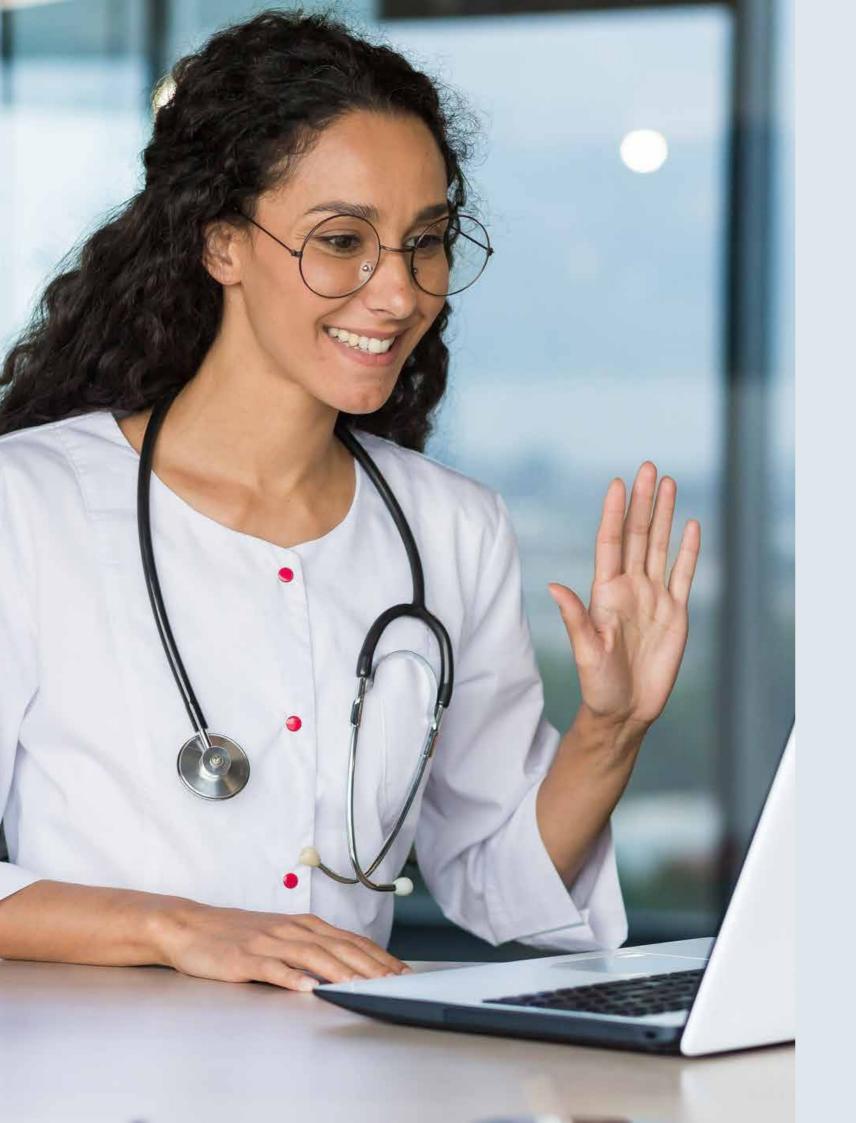### 3 Be responsible data custodians for humanitarian settings

In humanitarian contexts, the level of risk from data breaches, hacks, and exposures can be significant.[16] The data risks varied between CHIC-funded projects and included highly sensitive data on conflict, personal information such as demographic details, images, and potentially sensitive health and wellbeing information divulged to chatbots. The projects appear to have taken safety, security, and data privacy seriously. However, more focus must be given to responsible data use as the amount of humanitarian data increases and as AI algorithms become more powerful.[17] Several authors propose the standard use of a data protection impact assessment (DPIA) to manage threats from data breaches, including measures to prevent re-identification.[18] [19]

4 Design around the humanitarian context throughout the AI development cycle

In contrast to other innovations supported by CHIC, all AI-enabled projects were implemented by organizations headquartered in the USA, Canada, or Europe. This makes it more likely that the teams will overlook the distinct requirements of humanitarian settings, including practical needs, existing infrastructure and available technology, language considerations and literacy levels. Additionally, this oversight extends to the performance, precision, and potential biases of AI systems developed using training data from different contexts. Notably, at least one of the funded projects encountered challenges with pre-trained models when applied in humanitarian settings. Thorough planning is crucial when employing ready-made tools that may exhibit unexpected performance or biases in humanitarian environments.

York University implemented one of the most technically successful projects in the portfolio. The project developed and deployed machine learning and process-based modelling to forecast chlorine decay in refugee/IDP camp water supplies. Using existing water quality monitoring data, the tool generates site-specific and evidence-based water chlorination targets that help ensure water remains safe all the way to where it is actually consumed. The project has generated multiple peer-reviewed publications. [14]

Good quality data is a prerequisite for building useful AI applications. Missing Maps, a global collaboration, mobilizes volunteers to map uncharted areas through user-friendly tools and open-source apps. Humanitarian OpenStreetMap obtained satellite data from DRC, Uganda and Tanzania and worked with multiple teams of volunteers to trace the maps and then to add place name labels. The completed maps provide the data for future innovation.

The future

The CHIC-funded projects started before the widely recognized recent advances in AI. These advances are a result of progress in developing foundational models, which has made exploiting AI easier, cheaper, and more effective. Just as organizations now buy cloud services, future humanitarian organizations will use products and services built upon foundational models.

The single most critical factor to the success of CHIC's AI-related projects was the availability of large-scale, high-quality training data. This will be even more important for future AI technology, requiring a step-change in the availability of data and methods to collect and manage it.

REFLECTING, LEARNING AND ITERATING: LESSONS FROM THE CHIC INDEPENDENT EVALUATION

In 2023, the CHIC program concluded an independent evaluation—conducted by TripleLine Consulting—which took a deep dive into CHIC's first phase of programming from 2018-2023 and helped us reflect, learn, and develop an action plan to help shape our future approach. The full evaluation report can be found on our website. Here are the key takeaways and actions we are incorporating into the next phase of CHIC programming:

BUILD UPON OUR FLEXIBLE FUNDING MODEL: CHIC was valued for its boldness in focusing on the challenging space of conflict-induced crises. Building on successes from phase one, we will continue refining our unique and flexible funding model to enable the de-risking of promising innovations in some of the most complex crises and finetune it to further promote and enable powershifting to local innovators.

CONTINUE TO GENERATE ROBUST EVIDENCE: CHIC-funded innovations highlight the potential for profound impact for conflict-affected communities. CHIC will continue to strengthen support for innovators to generate robust evidence and use it to showcase the effectiveness of their innovations, particularly supporting localization efforts to attract funding.

DELIVER MORE TAILORED SUPPORT: We learned that although innovators found great value in innovator support activities, there are opportunities to enhance the support platform with deeper, more tailored, and regionally-based support offerings.

SHARE EVIDENCE AND LESSONS: Learning and sharing are the cornerstones of innovation work. With COVID-related lockdowns and travel restrictions now behind us, we will engage more deeply in regional events and on-site learning, and continue to convene critical conversations. We will also identify additional opportunities to publish and disseminate lessons across the humanitarian innovation ecosystem.

ACCELERATE DEMAND AND ADOPTION: To better support innovation adoption efforts, CHIC has developed an Innovation Adoption Strategy to double down on efforts to stimulate demand and accelerate adoption for innovation among international humanitarian agencies.

INITIATE NEW STRATEGIC PLANNING: More work must be done in our second phase of programming to more purposefully guide CHIC towards addressing some of the biggest humanitarian problems. We are embarking upon a strategic planning process in 2024 to guide our efforts into 2025 and beyond. We value the input from all our stakeholders—affected communities, innovators, partners, and funders—we are listening!

INCREASING INNOVATION ADOPTION: A PRECURSOR TO SYSTEMS-LEVEL INFLUENCE

For many humanitarian innovations, the key pathway to reaching the people most in need of assistance is through innovation adoption by large humanitarian aid agencies. However, for the majority of innovations, particularly locally-owned ones, adoption is impeded by numerous barriers. These include insufficient funding, complex procurement processes within humanitarian agencies, and an overall reluctance to deviate from the status quo of the established humanitarian system. Demand-driven local innovation and channels for uptake within large humanitarian agencies can be a precursor to influencing longer-term changes, ultimately leading to more efficient and more effective humanitarian responses. To continue addressing this challenge, CHIC has developed an innovation adoption strategy.

FIVE KEY ACTIONS

1. COLLABORATION

We will meet with aid agencies to identify their pain points in adopting innovations. We will explore their areas of need and look for opportunities for field-testing innovations.

2. MATCHMAKING

We will curate lists of relevant CHIC-funded innovations for aid agencies to explore and facilitate connections where synergies are identified. We will also continue to host "pitch-events" where innovators present their solutions to an audience of humanitarian actors and investors.

3. COORDINATION

We will collaborate closely with other innovation funding platforms for better coordination, research, and advocacy for the adoption of innovations. We will also encourage government donors to use their influence to motivate aid agencies to adopt ready-to-scale innovations.

4. KNOWLEDGE SHARING

We will adapt and share learnings tailored to the needs of innovation adopters and innovators. We will host events at key humanitarian sector gatherings, bringing together uptake partners and innovators to forge connections and share lessons in adoption.
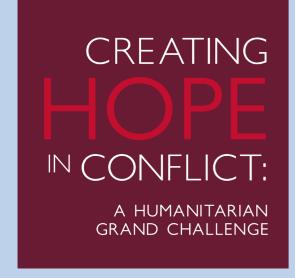
5. CATALYTIC FUNDING

We will explore new funding initiatives aimed specifically at encouraging the uptake of innovations by ecosystem players. For example, we will seek to support adaptations in procurement processes at the adopting agency level.

PHOTO SOURCE: YEMEN RELIEF AND RECONSTRUCTION FOUNDATION

31

ENDNOTES

1. UN OCHA (2018). Global Humanitarian Overview 2018.

2. UN OCHA (2023). Global Humanitarian Overview 2023, September Update.

3. Oxfam (2022). Footing the bill: Fair finance for loss and damage in an era of escalating climate impacts.

4. OCHA (2023). Revised Humanitarian Response Plan: Afghanistan (June-Dec 2023).

5. UNHCR Emergency Appeal (November 2022).

6. UNHCR (2023). Refugee Facts: Refugee Statistics.

7. UN OCHA (2023). Global Humanitarian Overview 2023, September Update.

8. Alnap (2022). The State of the Humanitarian System.

9. Alnap (2022). The State of the Humanitarian System.

10. At CHIC, we define locally-owned as an organization whose leadership and governance teams are comprised mostly of individuals who identify as being part of the conflict-affected community they are reaching and who are based in or around the conflict-affected region. Similarly, we define a locally-led innovation where at least one person in senior management position identifies as being from the conflict-affected community they are seeking to reach. This may also include individuals that are part of the diaspora.

11. Margffoy, M. (2023). AI for humanitarians: A conversation on the hype, the hope, the future. The New Humanitarian.

12. Classical AI uses rule based systems. In machine learning, computers are trained to learn from data, identify patterns, and make decisions or predictions without being explicitly programmed for every task.

13. Deep learning methods use human-brain inspired structures to process and analyze complex data, enabling them to make more sophisticated decisions and predictions.

14. The Safe Water Optimization Tool. Research and Development.

15. Ryan-Mosley, T. (2023). How AI can actually be helpful in disaster response. MIT Tech Review

16. Beduschi, A. (2022). Harnessing the potential of artificial intelligence for humanitarian action: Opportunities and risks. International Review of the Red Cross, 104(919), 1149-1169.

17. For example, researchers were recently able to reverse engineer information that had been input to ChatGPT.

18. Gazi, T. (2020) Data to the rescue: how humanitarian aid NGOs should collect information based on the GDPR. Int J Humanitarian Action 5, 9.

19. Kuner, C., Marelli, M., Barboza, J. Z., & Jasmontaite, L. (2020). Handbook on data protection in humanitarian action. International Committee of the Red Cross.

PHOTO SOURCE: NURU

CREATING HOPE IN CONFLICT:
A HUMANITARIAN GRAND CHALLENGE

ANNUAL REPORT
2023

USAID
FROM THE AMERICAN PEOPLE

UKaid
from the British people

Ministry of Foreign Affairs of the
Netherlands

In *partnership* with
Canada

Grand Challenges Canada®
Grands Défis Canada