

INSPIRED

By People in Need

7 | DEC 2021



Photo: Mech Sreylakh

INNOVATIONS

EARLY WARNING SYSTEM 1294

Story about PIN's nationwide early warning system.

BIOCHAR: THE „REAL” BLACK GOLD

Get to know biochar. What are its advantages?

ADDRESSING INDEBTEDNESS:

Inspired by a success story from the Czech Republic.



FOREWORD	3
EARLY WARNING SYSTEM 1294	4
BIOCHAR: THE „REAL“ BLACK GOLD	10
REMOTE LEARNING DURING COVID-19	15
ADDRESSING INDEBTEDNESS: INSPIRED BY A SUCCESS STORY FROM THE CZECH REPUBLIC	18
SCALING UP ELECTRONIC VOUCHERS IN SYRIA	21



As People in Need, we want to contribute to systemic changes towards a just and free world, where people are not forced to live in hunger and extreme poverty. Innovations can be a powerful help along the way.

In times of rapid digitalization, accelerated climate change and surging COVID 19 pandemic, innovating the ways we do things in the humanitarian and development sector has become an imperative.

There are plenty of opportunities in our work to learn, explore new ways and innovate. And it takes good skills, courage to fail along the way and a focused effort to get from a good idea through validating it in practice to scaling it up for impact.

This issue of the INSPIRED magazine explores some of the lessons learned from innovations tested within People in Need's programs, and introduces some new ideas for the future.

I wish you a good INSPIRED time.

Ondřej Nádvořík
Innovation Advisor
People in Need



SENSOR MAINTAINING by NCDM in Pursat City, Pursat Province.

Photo: Mech Sreylakh

Early Warning System 1294

In an effort to enhance the disaster resilience of vulnerable populations across Cambodia, PIN has established a nationwide early warning system (EWS), enabled through an effective longstanding collaboration with the country's National Committee for Disaster Management.



Jak Chowdhary

The development of EWS1294 has successfully strengthened the disaster preparedness and emergency response capacities of the Royal Government of Cambodia. Hence, the knowledge accumulated and lessons learnt throughout this 8-year process may be extremely valuable for the design of future projects aiming to achieve similar outcomes in alternative country contexts.

Programme Background

The inception of the project came following a period of intense flooding across the Lower Mekong Basin (LMB) in 2011, driven by a series of

tropical storms combined with heavy monsoon rains, which resulted in the worst flood season in the region since 2000¹. In Cambodia, the flood event caused 250 fatalities and 100 - 160 million USD worth of economic

250

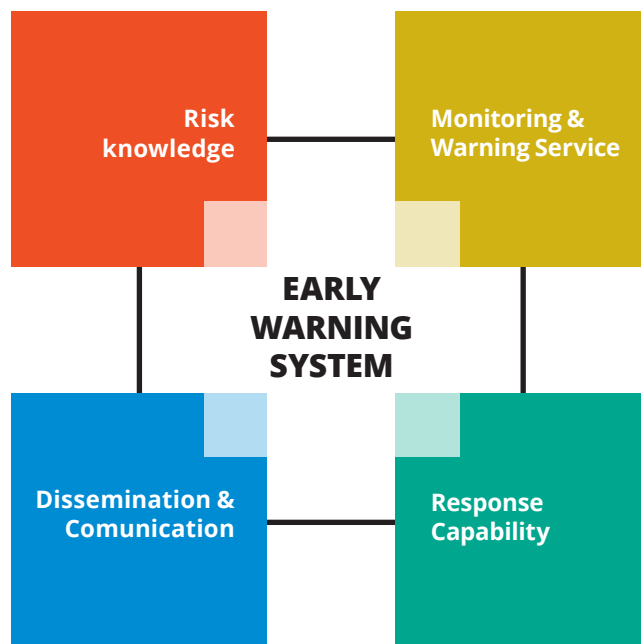
In Cambodia, the flood event caused 250 fatalities.

damage². Furthermore, Cambodia had experienced 34% of total flood fatalities and 35% of total flood damage in the LMB, for floods documented between 2000 and 2011. Hence, the

2011 flood event, in addition to the trends identified in the years prior, indicated a clear need to strengthen the flood management capacities of the Royal Government of Cambodia (RGC), leading to the conceptualisation of the EWS1294 project.

The goal of the project was to increase the disaster resilience of flood vulnerable populations through enhanced flood early warning systems (EWS). The initial approach aimed to develop an innovative dissemination platform that could be utilised by disaster management authorities to share timely life-saving information in advance of natural hazards. In 2013, PIN partnered with the RGC's National Committee for Disaster Management (NCDM), setting the institutional foundations required to ensure

successful future implementation. The platform was named EWS1294, after the phone number “1294” was granted by the Ministry of Post and Telecommunications (MPTC), as a free service for all users of the 3 telecommunication companies (Smart, Metfone & Cellcard). Initially the system was piloted in 3 flood prone villages in Pursat province, as a mobile phone early warning information dissemination platform, sharing voice messages to subscribers via interactive voice response (IVR) technology. Since its initial piloting, EWS1294 has developed into a multi-hazard multi-channel EWS, now recognised by NCDM as the country’s national EWS, and is operated by the Provincial Committees for Disaster Management (PCDMs) across all 25 provinces of Cambodia.



Programme Design

Developments achieved under EWS1294 have been designed based on the Climate Risk & Early Warning Systems (CREWS) checklist, an analytical framework published by the United Nations International Strategy for Disaster Reduction (UNISDR) in 2006³ and later refined by the World Bank (WB), the World Meteorological Organization (WMO) and the United Nations Office for Disaster Risk Reduction (UNDRR). The framework establishes four components for effective end-to-end, people-centred EWS⁴, as illustrated below.

Component 1 - Monitoring & Warning Service

To enhance the hazard monitoring and warning capacities of the RGC, PIN employed a technological approach to flood forecasting, developing

THE FOUR COMPONENTS for effective early warning systems⁵

through a collaboration between PIN Cambodia and the DAI Maker Lab. The aim was to create an affordable time-efficient technology that could be rapidly expanded to create a comprehensive flood monitoring network in Cambodia. The gauges were initially tested in two flood prone sites in the provinces of Kampot and Pursat, and over time have seen considerable software and hardware upgrades that have increased their reliability and resilience to the dynamic conditions that they are exposed to in the field. The existing network currently includes 28 sensors installed across the country.

Each unit shares near real-time water level data recorded at in-situ locations using sonar technology. This information is then

& Severe Warning Level). These thresholds indicate the point where fluvial conditions will lead to flooding and are determined during the sensor installation process. This information is then used to support the Provincial Committees for Disaster Management (PCDM) in determining whether to send a warning message to vulnerable populations via EWS1294. Additionally the EWS1294 sensors have been programmed to automatically trigger a phone call to the focal points assigned to that unit when the water level approaches a danger-threshold.

EWS1294 has therefore strengthened the hazard monitoring capacities of the RGC, by providing a flood monitoring platform to support NCDM’s decision-making during emergency situations. Current projects are now being implemented to enable NCDM to manage this component independently of PIN, through a combination of technical capacity building and by connecting the ministry to a local automations company who will serve as the technological focal point for the future.

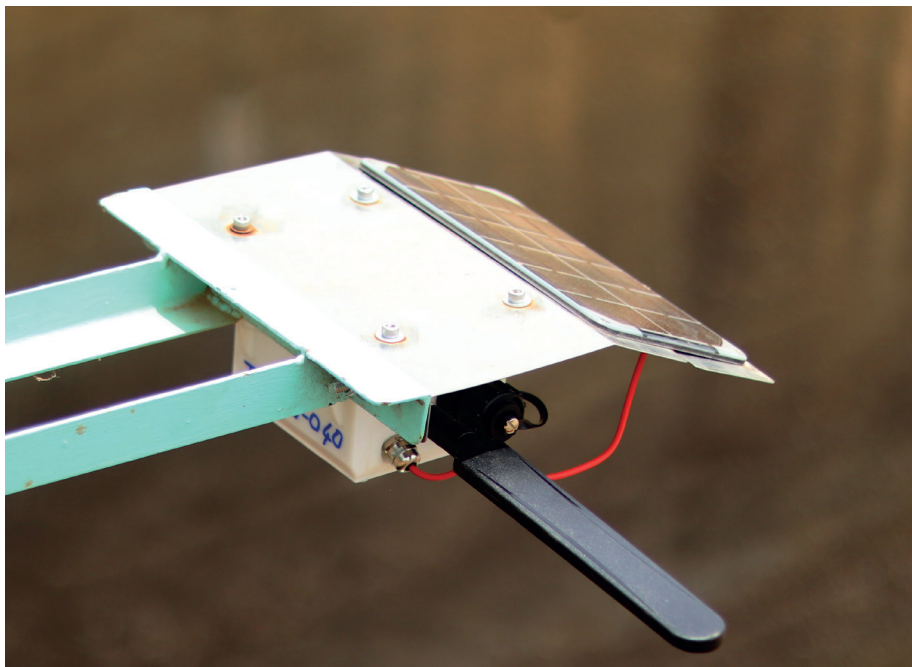
Component 2 - Dissemination & Communication

EWS1294 was initially designed as a dissemination tool to enable

PIN employed a technological approach to flood forecasting, developing a network of low-cost gsm-enabled water gauges, that provides scientific evidence of dangerous fluvial flood.

a network of low-cost gsm-enabled water gauges, that provides scientific evidence of dangerous fluvial flood conditions to the national and provincial ministries. These automated water gauges, named ‘Tepmachcha’, were developed in 2016

automatically shared to a centralised data visualisation platform that is accessible for disaster management authorities. The visualisation displays the water level trend over time and how close the level is to approaching a danger-threshold (Warning Level



TEPMACHA SENSOR in Kandieng District, Pursat province.

Photo: Koy Chanpor

last-mile connectivity from disaster management authorities to populations vulnerable to flooding. This component developed by PIN requires beneficiaries to subscribe to the system by calling the number “1294” and submitting their province, district and commune. These details, along with the phone number, are then stored on the EWS1294 data management platform. The recipient beneficiaries are then determined based on the target location of the warning messages, selected by the PCDM. The subscribers attributed to that location will then receive a phone call containing information on the upcoming hazard, as well as suggested instructions to promote good emergency preparedness actions. This model has been highly successful, leading to an accumulated 118,351 as of November 2nd 2021 unique subscribers, with the system activated for 168 callouts and 226,580 completed calls made in 2020 alone. The dissemination system is now being utilised beyond its initial purpose of flood events, to also warn vulnerable populations of storm events, intense periods of UV exposure and to reduce Covid-19 transmission.

Despite the abovementioned successes, EWS1294 must continue to be developed to increase the system’s reach, ensuring that a greater number of vulnerable people can

be accessed, following the ‘leave no one behind’ principle set out by the UN. To achieve this, PIN Cambodia are currently increasing the number of communication channels available under EWS1294, creating a multi-channel EWS. This has been enabled through a technical modification to the dissemination dashboard, following the WMO’s Common Alerting Protocol (CAP). CAP is an international standard for all-hazard emergency messaging that homogenises the format of alerts across all forms of media. This allows multiple communication channels to be triggered through 1 mechanism and ensures coherent messaging across each medium. Hence, the application

The dissemination system is now being utilised beyond its initial purpose of flood events, to also warn vulnerable populations of storm events, intense periods of UV exposure and to reduce Covid-19 transmission.

of CAP across an entire nation’s EWS, would considerably reduce the likelihood of mixed messaging and subsequent confusion amongst the public.

This standardisation was applied to the dissemination platform in August 2020, facilitating the addition of new and diverse communication channels. The first addition was the developed of automated Facebook posts that could be triggered directly from the

dashboard and posted to the EWS1294 Facebook Page, which currently has 130,000⁶ followers, marking a massive increase in system beneficiaries. Further channels currently being developed for EWS1294 include; Facebook Chatbot, Cell Broadcasting, Radio Broadcasting, Urban Public Speakers and Telegram Messenger. As the number of available channels continues to grow, the reach of the system will increase and have access to a wider demographic range.

Component 3 – Response Capability

To build the emergency response capabilities of Cambodian people and institutions, PIN has conducted flood emergency response trainings to District & Commune Committees for Disaster Management (DCDMs & CCDMs) across the country. These capacity building sessions have been undertaken as part of the EWS1294 promotional campaigns, to strengthen the knowledge of local institutions and increase subscription within communities highly vulnerable to flooding. The sessions involve a discussion on existing emergency preparedness and response plans, followed by a presentation by PIN’s Disaster Management team on the importance of EWS1294 within the disaster risk reduction (DRR) landscape of Cambodia. These presentations emphasise the value of early warning information and detail the appropriate actions to take after receiving a message from EWS1294.

In addition to the promotion of EWS1294 with disaster management authorities, PIN Cambodia also aims to strengthen emergency response capacities through the establishment of Village Disaster Management Groups (VDMGs). VDMGs are comprised of proactive members of the community who take the lead in disaster preparation, emergency response and impact recovery at village level. The groups are headed

by the Commune Chiefs and their assistants, with the traditional structure consisting of three sub-teams; (1) Rescue, (2) Sanitation and (3) Emergency Response. These groups are in effect across the Kingdom under the NCDM, DCDM, CCDM structure, although PIN has often supported the setting-up of VDMGs in communes where they are not overly active. VDMG activities conducted by PIN involve DM capacity building, through interactive sessions that impart disaster preparedness skills and emergency response knowledge, as well as encouragement to subscribe to EWS1294.

Through these abovementioned actions, in addition to promotional activities, the EWS1294 project has enhanced the response capabilities of the Cambodian people and its institutions, through the facilitation of early action by providing timely early warning information, as well as enhanced risk education through capacity building.

Component 4 – Risk Knowledge

The EWS1294 project has aimed to instil flood risk knowledge within local populations through promotional campaigns in schools, particularly in communities considered to be 'high-risk'. Similarly to the VDMG capacity building, the purpose of these sessions is to

spread an educational understanding of disaster preparedness, through interactive sessions with the younger members of the community, as well providing information, education and information materials to be shared with their families. This is an effective method for sustainably building risk knowledge

46%
In April 2019, there were an estimated 7.8 million Facebook users in Cambodia, accounting for 46% of the country's population.

that should be maintained within future generations, as well as enabling access to a large spatial coverage, due to the hub-nature of schools.

Since the creation of the EWS1294 Facebook Page in March 2020, PIN has been focussing on sharing educational materials online through social media. In April 2019, there were an estimated 7.8 million Facebook users in Cambodia, accounting for 46% of the country's population⁷; this number continues to grow as smart phones have become increasingly

abundant across the Kingdom. Social media platforms therefore present a valuable opportunity to enhance EWS, by disseminating early warning information and transferring risk knowledge to the population. Hence, PIN Cambodia are currently implementing a Natural Disasters Safe Steps Campaign, with the goal of strengthening public risk knowledge through the sharing of good disaster preparedness and emergency response actions. This campaign involves a range of media, such as videos, graphics, articles and interviews with national and international stakeholders.

Demonstrated Impact

In December 2020, PIN Cambodia conducted an assessment to evaluate the impact and sustainability of EWS1294 and identify areas for future developments to the system⁸. The evidence accumulated in the study demonstrated the extremely positive impact of EWS1294, by providing timely, life-saving, hazard warning information and therefore contributing to increased disaster preparedness across the Kingdom of Cambodia.

The assessment showed that the biggest benefit of the EWS for both VDMGs and subscribers is an improvement in emergency preparedness and response time. At



NCDM OFFICER carried metal bracket to install the sensor in Samluot District, Battambang province.

Photo: Tin Socheata

Key Lessons Learnt For Future Application



A primary focus of the EWS1294 project was to enhance the forecasting capacities of NCDM through the use of Tepmachcha river sensors. This was an innovative approach that attracted numerous project donors and led to large amounts of time and funding being dedicated to the development of the sensors. **Although, the developments have been successful and the sensor network is an important component of EWS1294, a greater impact may have been achieved if this effort was instead dedicated to the dissemination component, to enable the cell broadcasting communication channel that is currently being developed. This shift could have exponentially increased the reach of the dissemination system, which was the primary gap identified in the EWS landscape of Cambodia and would have prevented the limitation of the subscriber model.**



Despite the continual growth in subscribers and an increase in successful EWS disseminations from 2019 to 2020, a challenge identified within the impact study was to find a more effective way of increasing the reach, and therefore number of beneficiaries, of the system. EWS1294 was experiencing an increase of 50 subscriptions per day and a natural daily increase of only 10.3-26.2. **As the nationally recognised EWS for Cambodia, the existing subscription model must be reformed to either establish more effective methods of increasing subscribers or take an alternative approach to accessing at-risk beneficiaries.** Furthermore, the assessment showed that the number of failed calls was largely constant, and that it changes little with an increased number of subscribers. The fact that people in Cambodia change phone numbers frequently also limits the efficiency of continuing with a subscriber-based system. **As a result, PIN highly recommends transitioning to a broadcast-based dissemination modality, which would allow operators to adjust for a number of variables (changing phone numbers, coverage issues) and would ensure that the largest possible share of the population receives EWS messages.**



As demonstrated by the EWS1294 Impact Assessment, VDMG trainings are a highly successful method of increasing the emergency response capabilities of vulnerable communities. However, due to their localised nature it is inefficient to attempt to conduct these trainings on a large scale. **Hence, it would be more effective to design a high-quality TOT programme with disaster management authorities at a higher spatial scale, to build the capacities of the district governments and enable the VDMG trainings to be conducted over a wider region, on a more frequent basis.** While data collected in the impact assessment shows that PIN has already made effective use of Facebook as a communications tool for EWS1294, through the transfer of risk knowledge to the population, the study underlined the need to further capitalise **on the platform's reach, through the production of audience specific content coupled with financial boosting capabilities.**



A number of issues connected to the sonar sensors have also been identified which are further described in more detail at this [link](#).

the level of VDMGs surveyed, 76% reported taking actions very shortly after receiving EWS messages. Similarly, 93% of VDMGs highlighted the clarity of messages sent as a strong point of the system. At the level of subscribers, 76% of early warning alert recipients reported having more time to react to the coming floods, and 89% claim to know which actions to undertake thanks to the personalised messages. Therefore, EWS1294

provides an extremely positive impact to the Cambodian population, due to the high level of efficiency of the system and the strong clarity of the messages that are disseminated; enhanced by the inclusion of the CAP standardisation.

One of the most important impacts of EWS1294, to ensure a people-centred approach, is the system's influence on community action after receiving a warning message. This is supported

by the results of the impact assessment, showing that 61% of subscribers take actionable steps after receiving a message from EWS1294, including the protection of family and livestock (41%), emergency preparedness (88%) and evacuation (24%). 90% of registered users forward the information received in warning messages to other people in their surroundings. With the average household size of registered users, which is 4.7 persons (from impact assessment data), the impact of one received early warning message increases exponentially with each additionally informed person. Of the total number of VDMGs involved in the study, 55% said that after receiving the warning message they also inform others in their area. Hence, an additional strength of EWS1294, is that the messages contain valuable information that can guide beneficiaries towards important disaster prevention actions, prior to flood events.

The analysis showed that the confidence of government officials in the system is very high, and that the majority believe that EWS1294 increases the safety of people in vulnerable areas. The assessment showed that PCDMs know how to operate the system and are fully capable of sending early warning alerts. This was reflected by the callout data, reporting that 235 callouts were made by EWS1294 in 2019 and 2020, successfully completing 284,838 calls across 21 different provinces. These calls were responsible for reaching an estimated 1.17 million people and displayed vast amounts of growth in terms of dissemination, exemplified by the 184.7% increase in the number of callouts and a 335.3% increase in completed calls from 2019 to 2020. These statistics therefore support the positive and sustainable impact from the EWS1294 dissemination platform, which is directly linked to the government's confidence in the system's effectiveness.

1 Additional information can be found at: <https://earthobservatory.nasa.gov/images/76212/floods-in-cambodia>

2 Data sourced from: <https://www.mrcmekong.org/assets/Publications/basin-reports/Annual-Mekong-Flood-Report-2011.pdf>

3 Source: <https://www.unisdr.org/2006/ppew/info-resources/ewc3/checklist/English.pdf>

4 Information from PIN Cambodia's internal study: People in Need (2019) Flood Early Warning Systems in the Lower Mekong

5 Graphic taken from: United Nations Development Programme (2018) Five approaches to build functional early warning systems.

6 As of 27/10/2021

7 Data sourced from: [https://napoleoncat.com/stats/facebook-users-in-cambodia/2019/04#:~:text=There%20were%207%20810%20000,group%20\(3%20600%20000\)](https://napoleoncat.com/stats/facebook-users-in-cambodia/2019/04#:~:text=There%20were%207%20810%20000,group%20(3%20600%20000))

8 Contact PIN Cambodia for access to the EWS1294 Impact Assessment document.



MS CHEA CHAMROEUN, Village Chief of Banteay Neang Commune, Banteay Meanchey Province.

Photo: PIN

Case Study: Village chief saves lives in Cambodia with EWS1294

Chea Chamroeun is village chief of the Banteay Neang commune in the Mongkul Borei District, located within Cambodia's Banteay Meanchey Province. In 2015 Chea Chamroeun participated in a workshop organised by PIN on EWS1294. Since then, Chamroeun has been helping her community prepare for the worst. Chamroeun stated: "It's a great tool, and subscribing to the system was simple and straightforward, so it was easy for me to share it with the members of my commune. I think about 30 people registered with the system after I told them about it."

In October 2020, 14 provinces, including Banteay Meanchey, were affected by flash flooding. Houses, agricultural land, and infrastructure, including roads, schools, and health centres were inundated. Leam La, a staff member of Banteay Meanchey's Provincial Committee for Disaster Management, reports that "Banteay Meanchey Province was one of the most affected provinces,

second only to Battambang. Approximately 192,240 people were affected, of which 4,567 were displaced. 28 people lost their lives, including five children."

Several hours before the flash flood, Chamroeun was alerted to the impending disaster by EWS1294. "I received a call from EWS1294 the morning before the water made its way to my village. It was unexpected because the last time we experienced flooding was eight years ago, in 2012", she recalled. Although the alert caught her by surprise, Chamroeun remained calm, acted quickly to inform the other villagers of the unexpected event, and

immediately moved her disabled son to higher ground.

Five hours later, the flash flood wreaked havoc on the commune, destroying approximately 194 hectares of rice fields and crops, and damaging 200 houses. "I was glad to receive the timely warning from 1294. As a village chief, it allowed me to disseminate information to the villagers more quickly than before and to prepare for evacuation. The early warning made a big difference, especially for my disabled son," says Chamroeun. Although the flood greatly impacted their livelihoods, no lives were lost at Banteay Neang Commune.

i EWS 1294 - funding partners

Since 2013, PIN has been working closely with its partners and various levels of government in Cambodia, to strengthen climate information and early warning systems. The continuous development of EWS 1294 is led by PIN, with funding from the Ministry of Foreign Affairs of the Czech Republic and UNDP Cambodia. The programme was also previously funded by the EU's Civil Protection and Humanitarian Aid Operations, the World Food Programme and the Swiss Agency for Development and Cooperation, with support from the National Committee for Disaster Management.



INDUSTRIAL LEVEL combustion chamber for household heating and biochar production.

Photo: nordregio.org

Biochar: the „real“ black gold



Jakub Zelený
Climate Change Advisor
People in Need

You might have heard about it, or at least it might sound familiar, but what is biochar? First of all, biochar is not charcoal. While the more commonly known charcoal is burned as fuel for heating and cooking, biochar is primarily a soil amendment. Both emerge as a result of heating woody or organic matter, a process which is commonly termed pyrolysis, and both have been traditionally created in very simple ways in most parts of the world. But while charcoal is typically just an analogous material to coal, there is much more to biochar.

What is it useful for?

Unlike charcoal, biochar can have a decisive role in averting soil degradation and climate change. Biochar has a number of very interesting characteristics which



THE PRODUCT of complete pyrolysis which can no longer be used as fuel but serves as a soil amendment and helps to sequester carbon from the atmosphere.

Photo: PIN

makes it useful for a range of purposes. When observed under an electronic microscope, biochar particles contain myriads of small geometric caverns and “cells.” Due to an extremely high surface area, and the ability to chemically bind all sorts of chemicals, biochar serves as an excellent adsorbent of not only nutrients for

plants, but also toxic substances and pathogenic bacteria. The ability to bind nutrients significantly reduces the demands of biochar amended soils for fertilizers, both chemical and organic.

Bacteria like biochar a lot: its high surface area and ability to bind soluble nutrients serve as a breeding ground for soil bacteria, but also as a “shelter” for them in times of drought. Note that soil bacteria are vital for soil fertility, have the ability to support “higher level” biodiversity, such as earthworms, and are responsible for creating the “structure” of soil as they construct and maintain a net of soil micropores, which allow for the passage of oxygen, water and help prevent soil compaction. Due to its high absorbance, biochar is also used in various filters to separate toxic substances from air and water and can also easily be used in solid waste treatment (i.e. in toilets) as an additive to boost its natural decomposition

and composting. Biochar is also typically used as “carbo medicinalis” during stomach-aches as it helps ease stomach and digestive tract infections thanks to its ability to adsorb bacteria. This can also be used to improve the health of livestock and poultry, if used as an additive in their feed.

For the purpose of soil amendment, biochar can be distinguished between “activated” and “non-activated” biochar, where “activated” means that bacteria had already colonised the material (which changes its physical, biological, and chemical properties). In any agriculture usage, biochar used should always be “activated” before its application, either by mixing in compost or human/animal liquid or solid waste and left for a number of days to colonise itself. Note that other means of activation are possible, but typically the two mentioned above are most feasible.

Another advantage of biochar is that it serves as a strong adsorbent of water. This makes biochar very suitable for increasing the resilience of soils to droughts. Biochar particles serve as sponges which inflate as they come into contact with water. Thus, biochar becomes extremely relevant in drought-prone and generally arid

areas as it both reduces the demand of plants for watering and prevents the general runoff of water from soils making them less prone to drought related degradation and erosion. Increased water retention represents a key adaptation strategy to help cope with the adverse effects of climate induced droughts and/

of human-induced global warming. When burning, around 50% of the carbon content of the fuel’s biomass is converted into biochar and can be stored in soils. Biochar has therefore, both very strong adaptive as well as mitigative potential when it comes to addressing climate change, can be used to treat pollution, both

...biochar can have a decisive role in averting soil degradation and climate change.

or the increased frequency and severity of rains and storms normally resulting in soil erosion and a loss of soil fertility. It also helps reduce the costs for watering, water delivery and extraction and generally helps to reduce the uptake of surface and subsurface water preventing droughts.

Third, and no less relevant, is the potential of biochar to resist its own degradation and thus to have the capacity to last in soils for hundreds and thousands of years. As biochar is almost completely composed of pure carbon, its inclusion in soils helps sequester carbon from the atmosphere and could, in theory, be used to mitigate a significant portion

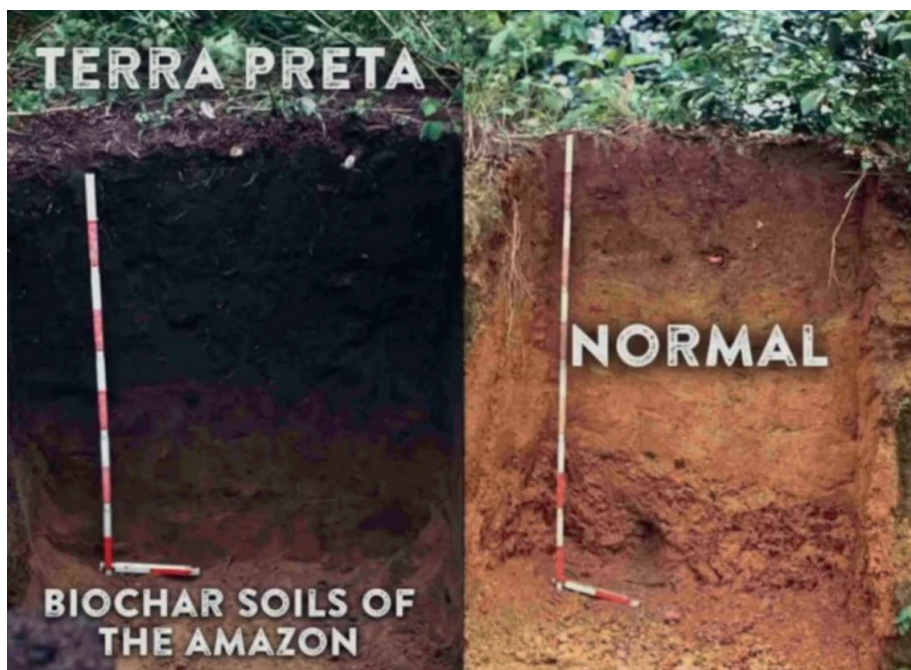
chemical and biological, has medical benefits, and can significantly reduce the costs of plant production, while increasing the fertility of soils and thus production of crops. Can you imagine anything as valuable, yet easy to make, as biochar? That’s why it is referred to as “black gold.”

How is it made?

Typically, woody or plant-based matter is burned in stoves or open fires in order to produce heat, cook food or heat houses. Thus the material will burn down completely (under fully oxygenic conditions) resulting in white ash. This process can release a mixture of irritating particles and gasses, depending on the technology used for the burning. During pyrolysis however, organic material is heated to release combustible gases, which then burn as they come into contact with oxygen in the combustion chamber. It sounds complicated, but in fact this can be done in a truly primitive way, either in a cone-shaped earth pits (fireplaces with conic shaped holes) or similarly shaped metal (or other materials, such as clay, would work as well) containers.

Why is it interesting for the economically vulnerable communities?

Besides simple pits and the so-called “retorts,” biochar is typically burned in modified stoves, also referred to as rocket stoves. These increase the efficiency of biochar creation and allow the utilization of the heat, which is produced as the combustible gases burn. But unlike typical burning, pyrolysis releases minimal pollution and is thus much less hazardous to health and more suitable



THE BLACK SOIL, also called “terra preta” can be found in many places in the Amazon rainforest and serves as proof that biochar has been burned and used by ancient inhabitants of the forest to increase the fertility of the traditional agroforestry system. It is a simple technology indeed, yet largely unknown and unutilized in the developed world today.
Photo: www.vitantica.net



MAKING OF BIOCHAR left: in a conic shaped pit and right: in a metal mobile retort

Photo: PIN

for usage indoors. Since woody types of fuel (wood or charcoal) are still very much used throughout the countries of the global south, a large proportion of the population is exposed to irritating smoke causing respiratory issues. This also means that a very large proportion of the poorest population is using wood, plant- or wood-based fuels which could be turned into biochar and become a key ingredient in increasing the resilience of the most vulnerable communities.

To sum up, biochar can be beneficial especially to the poorest communities exposed to multiple threats including water scarcity, soil degradation, climate change, water and human waste treatment, health of people and animals including respiratory diseases prevention, fuel scarcity and energy poverty.

Rocket stove

A rocket stove is a super-efficient small combustion stove. Its intelligent design makes use of any small fuel sources such as twigs, small branches, pinecones, and dry grass. This means a fuel source is: More readily available, easy to gather, transport and can be sustainably cultivated! But most of all, it is FREE (no need to mine, process and transport it like e.g., LPG, solar panels, charcoal, eco-briquettes).

These small fuel sources are burned in a combustion chamber containing a vertical chimney. The design ensures nearly complete combustion. This means you're getting more heat output (for warmth or cooking) than traditional firepits or even wood stoves.

The first ones built were based on an old lamp design that has been

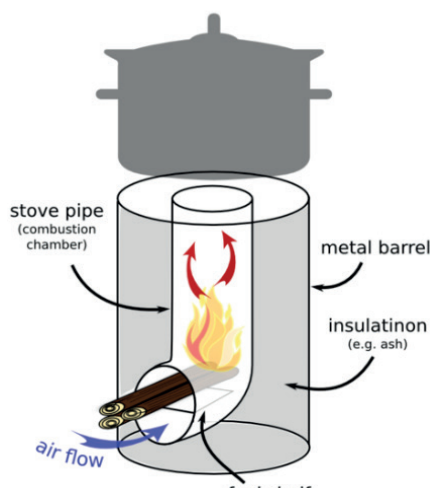
around since at least the 1700s. Since those early years, it's undergone incremental improvements over the centuries. The modern-day rocket stove was officially designed in the 1980s. They were originally built to support an improved cooking system for impoverished communities. It is worth noting that the modern design did not gain a significant popularity among the target audience, but there are also traditional and adapted traditional stove designs which are designed on the same principle and could be more successful at overcoming cultural barriers.

The simple design of the rocket stove captured the world, because they are relatively easy and inexpensive to build. Even with scrap materials from a recycling bin or a small amount of concrete! Unlike a traditional wood



LEFT: popular three-stone technique of household cooking, often performed in black kitchens with poor ventilation and RIGHT: improved rocket stove design with a biochar chamber, saving fuel and effectively cooking without the creation of irritating smoke.

Photo: PIN



BASIC ROCKET STOVE DESIGN. Note that in household environments where the purpose of the stove is to heat the house while cooking, the combustion chamber's insulation is unnecessary.¹ Photo: Wikipedia

stove, a rocket stove has no moving parts. This means no flue damper and no air inlet grate!

The basic rocket stove has only 4 components:

→ The "Elbow" – a fire-proof L-shaped pipe with a 90-degree bend in the middle. The horizontal portion of the elbow is the fuel chamber and air inlet. The vertical portion is the combustion chamber and chimney.

→ The Stove Body – an insulated surround for the elbow, capable of withstanding the high heat from the elbow. Large metal food cans (or metal trash cans) work great, as does sheet metal bent to fit around the elbow. A hole in the top allows the chimney to exit upwards. And a hole on one side allows access to the fuel chamber and an air inlet.

→ A Fuel Grate – ideally the fuel needs to sit up off the bottom of the fuel chamber. Normally a metal shelf provides airflow under and around the fuel. This allows any ash to fall through and be removed.

→ A Pot Skirt (optional) – this allows you to place a cooking pot on top of the chimney. It maintains an air gap to allow hot-rising gases to escape the elbow. The pot skirt also blocks the wind from the bottom of the pot. This helps provide for better heat transfer for faster cooking.

Distribution of population according to the primary* fuel used for cooking (2011)

COUNTRY	% MODERN FUELS** OR COAL	CHARCOAL OR COAL		% OTHERS (crop, residues, etc.)	
		together	% charcoal	% wood	
Benin	6,2	92,8	22,9	70,0	1,1
Burkina Faso	8,1	90,5	4,9	85,6	1,4
Cape Verde	64,2	33,4	0,0	33,4	2,4
Ivory Coast	16,1	83,7	22,3	61,4	0,2
Gambia	5,5	89,6	14,3	75,3	4,9
Ghana	15,0	81,6	38,1	43,5	3,4
Guinea	23,7	74,6	74,2	0,4	1,7
Guinea Bissau	1,9	97,5	33,6	63,9	0,6
Liberia	0,2	98,8	48,1	50,7	1,0
Mali	0,5	96,0	17,4	78,6	3,5
Niger	0,9	97,0	2,9	94,1	2,1
Nigeria	32,6	65,6	2,9	62,7	1,8
Senegal	38,6	58,2	7,8	50,3	3,2
Sierra Leone	0,8	98,7	14,8	83,8	0,5
Togo	1,7	97,7	41,8	55,8	0,6
ECOWAS countries	22,7	75,4	12,9	62,5	1,9

* fuel used most often for cooking the main daily meals.

** gas (including LPG), kerosene and electricity.

Source: World Health Organization data base (WHO), 2009; Programme regional pour la promotion des energies domestiques et alternatives au Sahel (PREPAS) du Inter-States Committee for Drought Control (CILSS).

First, the fuel blocks most of the air inlet, providing a limited amount of air for the fire. This forces the air in a smooth stream under and around the fuel. As this current passes around the tip of the fuel, it provides a constant stream of fresh air to the fire. Second, the fire is only burning at the tip of the fuel. As you slide more fuel into the chamber, it advances the burning material into the air stream from the inlet. This makes it easier to control the burn rate and to keep an even temperature. Third, with the pot

positioned above the chimney, you focus as much heat as possible onto your cooking pot. This means little waste and less fuel is needed to get dinner on the table!

Biochar and circular models of production

Biochar manufacturing should never be the only purpose of burning organic material, but mainly as a by-product of heat and energy production. Rocket stoves used for cooking and heating not only improve fuel use, but



THE PRODUCT of complete pyrolysis which can no longer be used as fuel but serves as soil amendment and helps sequester carbon from the atmosphere. Photo: Wikimedia

also produce biochar which can have a lot of other uses in a household; but one of the most interesting ways of using it would be to enrich the soil and thus support the production of woody biomass, i.e. fuel. That way, biochar can be the element closing the loop between fuel production and combustion. Sustainable energy models using biochar can only be of benefit if they do not lead to deforestation or the removal of naturally occurring vegetation. The key idea is that biochar is used to improve soils where fast-growing woody plants used as fuel are sustainably cultivated (e.g., bamboo, willow, poplar,

eucalyptus) or harvested. These then serve as a source of energy and biochar, leading to further soil improvement and higher wood yields.

Biochar can also be used in toilets, household vegetable gardens and smallholder fields, where plant-residues can also be burned in a similar manner and supplement the primary fuel crop (fast growing trees or bamboo). This model is feasible in any rural or urban community both in poor and ultra-rich contexts. It typically includes a strong community element, where inhabitants can be included in biomass collection, cultivation and biochar utilization including using it

for heat in households. In urban areas, biochar can significantly contribute to the survival and functioning of urban vegetation, reducing the costs of watering and thus, contribute to the reduction of the urban heat island effect while producing woody materials for making biochar and heating houses.

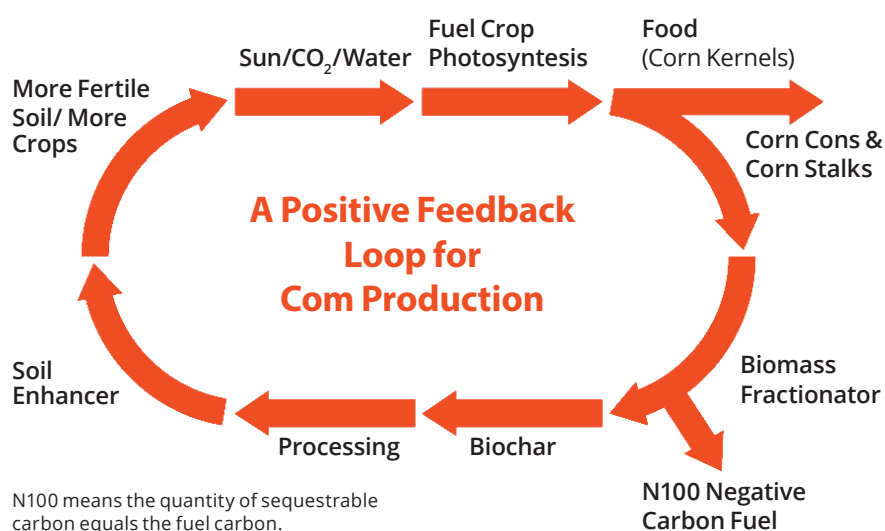
Use cases:

Stockholm Biochar Project: Managing the increasing amount of waste generated in urban spaces is a common challenge to cities worldwide. Since March 2017, Stockholm has been working to address this problem by opening the first large scale biochar plant. This project reduces carbon emissions while engaging people in the fight against climate change. Residents provide garden waste to the city, which produces biochar – a charcoal-like product that sequester carbon in soil for thousands of years.

There are also a number of examples of applied and research projects in global south countries. If you are interested to know more about them, it is worth exploring at the link below.

<https://biochar-international.org/biochar-in-developing-countries/>.

1 https://3.bp.blogspot.com/-5LuhdNbngMs/USWYI3f2PxI/AAAAAAAAAASs/OGaWctWaAtM/s1600/Rocket_stove.png



A CIRCULAR MODEL of food and fuel production based on corn cultivation and corn biomass combustion with biochar by-product.

Remote Learning During Covid-19

During years of political strife and conflict, consistent access to quality education was already difficult for children living in northern Iraq. The COVID-19 pandemic, and the subsequent closures of businesses and institutions – including schools – created even more barriers to children’s learning and development.



Clare Sadd
Advisor for Education

What did we do?

In order to mitigate some of these risks, People in Need worked with communities in the Nineveh, Kirkuk, and Salah Al Din governorates to find a solution for thousands of children whose education was put on hold. People in Need helped facilitate the transition from traditional classroom learning to distance, at-home, learning. The approach was built through consultations with teachers and community members to ensure that the process was in line with their lived reality and expectations.

As most families in target areas had access to at least one smartphone, the most effective approach was determined to be the delivery of remote lessons through photos and videos sent through messaging applications like WhatsApp. People in Need supported the development of a written Standard Operating Procedure (SOP) that outlined all of the key steps to successfully implement a remote learning approach through phone messaging. Here’s an idea of what the approach looks like:

Step 1:

Inform parents

Each teacher calls the parents of the students by phone to explain the purpose of the remote classes and to ensure children have access to a smartphone for at least two hours per day to access learning content.

IMPACT OF SCHOOL CLOSURES



Impact on students

- **Interrupted learning:** Children and youth deprived of in-school, face-to-face learning.
- **Interrupted access to in-school resources:** Children unable to access resources and services usually provided at learning centres (i.e. book banks, psychosocial support).
- **Interrupted access to in-school safety:** Children at greater risk of child labour, early marriage, domestic violence and sexual exploitation.
- **Negative psychological and physical impacts:** Children’s regular routines and access to support networks (peers, teachers, etc.) are disrupted.
- **Social isolation:** Children and youth miss out on social contact essential to learning and development.



Impact on the community

- **Communication:** Need for strengthened communication about how to minimize high-risk behavior and promote healthy hygiene practices.
- **Economic costs:** Loss of wages for personnel in schools, increased absenteeism as parents stay home to watch children. Leads to wage loss and an overall reduction in productivity.



Impact on caregivers

- **Loss of income:** Households at risk of losing income as parents stay home to care for children.
- **Lack of preparedness for home learning:** Parents may be ill-equipped to facilitate learning at home, also increasing level of stress for parents.
- **Unequal access to resources and technology:** Home-schooling can exacerbate existing divisions and learning gaps between children when schools reopen.



Longer-term impacts of school closures

- **Lost opportunities** for learning and developing holistically.
- **The longer children are out of school the less likely** they will return once schools re-open.
- **Impacts particularly acute for disadvantaged children**, making it harder to close the achievement gap between high- and low-income students.
- Potential increased risk of **child labour, early marriage, sexual exploitation, and recruitment into militias.**

Standard Operating Procedure (SOP)

1 | STEP 1:
Inform parents



2 | STEP 2:
Set up
a Distance
Learning
Coordination
Group



3 | STEP 3:
Set up
timetables



4 | STEP 4:
Create
your virtual
classroom



5 | STEP 5:
Plan your
lessons



6 | STEP 6:
Conduct
daily
lessons

Step 2: Set up a Distance Learning Coordination Group

Teachers from the same school set-up a coordination WhatsApp group for themselves, including school management and a PIN representative to be able to coordinate the timetable and responsibilities.

Step 3: Set up timetables

Establish timetables for each grade/class and share them with all relevant teachers, students, and parents.

Step 4: Create your virtual classroom

Each teacher creates a WhatsApp group including all of the students in their “virtual” class.

Step 5: Plan your lessons

Teachers create lesson plans for each lesson, sharing them in the coordination WhatsApp group, as well as with the Head teacher, on a weekly basis.

Step 6: Conduct daily lessons

→ Each morning, send daily tasks to students, as well as homework for that day. Send one voice recording explaining the material they will learn about and give clear instructions on what to read/complete from the textbook.

Apart from normal school lessons, People in Need also offered psychosocial support activities through similar channels. These activities were designed to provide children with regular support for their wellbeing and help them to develop key social and emotional skills.

These activities were generally provided or supported by caregivers at home, or where Covid-19 restrictions allowed, by facilitators in small groups of households.

I see that they are constantly evolving by following their daily lessons.

”

A mother, Nineveh

What worked and what didn't work?

At the beginning, not every family knew how to use the mobile applications necessary for the classes or had reliable enough internet access. PIN-trained facilitators were provided with internet access and went to homes to support families in learning the new process. However, this did not resolve challenges for families without, or with limited access to, smartphones, or those with multiple children needing to share one device.

This indicates the need for a hybrid approach to remote learning, with phone-based learning

It was a very critical time when PIN resumed the activities for me personally. I felt pressure and distress because of all the news on COVID-19 and the number of infected people and the death rates so I needed something to get busy with, and this opportunity was perfect.

”

Abdul, 28-year-old educator at a boy's school in Nineveh

→ In the afternoon, plan the materials for the next morning lessons, correct homework from the previous day and send individual feedback on the work completed to students.

→ Share best practices and learning weekly, or as questions or comments come up, with the coordination WhatsApp group.

being complemented by other communication methods such as the distribution of physical worksheets and activities as well as the sharing of audio or video files in other formats or the delivery of in-person lessons through household visits – ensuring that relevant COVID-19 precautions are taken. This is a challenge that People in Need is working on so that



IN THE SPRING AND SUMMER OF 2020, due to school closures and the COVID-19 pandemic, PIN brought distant learning and PSS activities to the homes of children across Nineveh in northern Iraq. Photo: Ruaa Habib

we are better able to support children from low-income or low-literacy households in the future.

Some children reported that they benefitted from remote lessons –

Anecdotal evidence suggests that some students, particularly those more cautious about participating in a classroom environment, flourished during remote learning.

[Remote learning] gave me the opportunity to learn and have fun during curfew. I became less nervous after joining the remote learning activities also because I get to talk to my friends on a daily basis and my teachers as well.

Ghofran, aged 11

and had increased access to their teachers - more than during normal in-school classes.

Where before they may not have had the chance to ask questions in a crowded classroom environment, they now found themselves with a platform through which they could communicate with their teacher and ask questions or request support as and when they needed it.

Best practices learned through piloting the approach are outlined in the text box.

What impact did it have?

Together with our donors and stakeholders, PIN brought remote learning opportunities to 53 schools, which impacted 19,782 children in Iraq.

i Best practice

- Grade 1-4: one group/grade
- Grade 5+: one group/grade for each subject
- Include all children and check they received the first message
- Make sure only teacher and school management have admin rights
- Keep record of who is and is not participating
- Plan voice recordings in advance
- Only send one recording with all relevant information each day
- Keep recordings short
- Give very clear instructions and deadlines
- Design homework so students can submit through whatsapp photo or voice recording
- Try to set group tasks to encourage communication amongst students
- Set clear deadlines for submission of homework
- Mark and return homework in a timely manner
- Give positive feedback to encourage motivation!



ANIMATION VIDEO produced under the framework of the project “Tackling Indebtedness in Georgia through Czech Innovations” funded by the UNDP Challenge Fund and the Ministry of the Foreign Affairs of the Czech Republic. The aim of the video was to raise awareness about consumer protection rights in Georgia and provide recommendations on how to take a loan and manage debt in a safe and affordable way. The opening scene from the animation video starts by announcing the following “When borrowing money is important for us, we have to do it on a right way!”

Addressing indebtedness: Inspired by a success story from the Czech Republic



Eva Fernández
Program Quality Support
Officer

During 2020, People in Need (PIN) Georgia embarked on a project to tackle indebtedness following in the footsteps of PIN’s success story in the Czech Republic. The idea behind the pilot project was to replicate the Czech methodology concerning debt advocacy and debt advisory support services, and to transfer the knowledge and know-how and adapt it to the local context in Georgia. While the project is now looking into opportunities for scaling-up, various important lessons have been learned that can be drawn on from its pilot phase to improve the future replication efforts in other contexts.

The Czech success: from direct work to systemic impact

PIN’s debt advocacy journey started with a social integration programme with the Roma community in the Czech Republic. PIN had initially been focusing on providing legal assistance and job counselling as well as debt advisory services, but was unable to achieve enough tangible and impactful results. It was only after PIN decided to delve into the data gathered from the experiences of the beneficiaries that they identified the root causes of the debt trap. Entire families were being hamstrung by abusive loan shark contracts, a rigid debt collection process and a system that had excessively high-priced sanctions and penalties. In response, PIN developed

a public advocacy strategy and toolkit to combat public indebtedness in the Czech Republic. To date, the innovative debt support and advocacy programme has demonstrated that it is possible to engage with policymakers to reduce predatory lending practices, raise public awareness, help rebuild personal finances, and reduce the number of people becoming impoverished, homeless, or incarcerated. A successful example of PIN’s strategy is the so-called “Index of Predatory Lending,” a comprehensive comparative analysis among credit providers to expose predatory practices that includes a public ranking. This was an extremely effective method that pushed for the self-regulation of banking and non-banking entities as they eventually



THE SCENE PROVIDES specific key recommendations for borrowers: Communicate with your borrower through letters and record all your interactions with the borrower, as these documents can be used as a document during trial.

adopted the ranking as a marketing strategy to boost their reputation.

Best practices

Earning the media's trust and nurturing the relationship with media actors by being consistent with sharing our findings and opting for a scandal-focused approach, all proved to be key for debt advocacy advances. At the same time, PIN's advocacy strategy is based on solid and expert-led research that can be used to mitigate risks of retaliation from concerned credit providers.

An International Comparative Analysis was also produced by PIN to reassure politicians and the public opinion that changes were possible and had been successful elsewhere as demonstrated from the examples in other countries. The Analysis was also a crucial tool for advocating against the high fees and expensive practices of the attorneys and debt collectors in the Czech Republic, as well as the harmful proceedings that were often responsible for increasing people's debt exponentially. According to the findings of the research, financial

literacy-focused interventions are not the most effective way to achieve long-term impacts. Rather, strategies revolving around instigating change within credit regulations and consumer protection rights are more likely to drive systemic change.

Indebtedness in Georgia, a crippling issue threatening development gains

Even before the COVID-19 pandemic, indebtedness in Georgia was one of the drivers of poverty, homelessness, and inequality. Unfortunately, the economic



THE SCENE PROVIDES recommendations on negotiations with Lender/Bank, in regards to restructuring or deferment of a loan.

impacts of COVID-19 exacerbated these trends and highlighted the alarming vulnerability around debt that many were facing in the country. Similar to the early beginnings of the debt crisis in the Czech Republic, credit in Georgia is characterized by high-interest rates, low flexibility, and formal and unregulated sources. Debt is also encouraged by a highly permissive lending environment and a lack of consumer protections.

The project addressing indebtedness implemented by PIN was done in cooperation with an economic think-tank and lasted 9 months. The first component of the project was an evidence-based advocacy campaign that included a research report with policy recommendations and a public media campaign. The second component was dedicated to debt advisory support for which PIN developed a Debt Advisory Guide for CSOs and Local Action Groups (LAGs).

The most urgent findings and recommendations from the research report were in relation to the:

→ Need for drafting a personal bankruptcy law for individuals based on best practices from the EU to provide a path out of debt for those who face an unsalvageable situation.

i Lessons learned and suggestions for future programming

- Always ensure debt advocacy claims have a solid research foundation based on evidence.
- Combine fieldwork with advocacy in order to stay in touch with the realities on the ground and strive for systemic change.
- Find creative ways of engaging credit providers in self-regulation.
- Nurture the relationship with the media as they will be key allies for disseminating your findings and bringing about behavioural change.
- Engage politicians across the political spectrum for a more effective advocacy approach.

→ Regulation of the use of arbitration and a ban on the arbitration law in debt litigation involving consumer loans.

→ Regulation and de-monopolization of pension loans.

In hindsight, the project allowed us to have a more comprehensive understanding of the debt environment in Georgia, while revealing a number of things specific to the Georgian context. While we managed to stimulate public debate among stakeholders, we didn't fully achieve tangible advocacy results concerning self-regulation among credit providers or legal regulation, as was in the case in the Czech Republic. A more ambitious follow-up project with a larger scope, timeframe, and funding could be in a better position

to affect real change in regard to credit regulation.

More in-house experience is needed to be more independent from external partners. This would entail taking a much more sustainable approach for PIN, for instance, when engaging in debt advisory support services as this component could be crucial for gaining access to practical information about the common issues that indebted people face. At the same time, the road to credit regulation can be a costly one reputation-wise, which is why it is important to find ways to take the lead on advocacy efforts from within PIN while consciously trying to avoid relying solely on external partners that might not be willing to lobby as "aggressively" with credit providers.



THIS SCENE URGES borrowers to contact a professional lawyer before signing a loan agreement.



SHOPPING with e-vouchers.

Photo: PIN

Scaling up electronic vouchers in Syria

In 2020, Syria was the first country to pilot use of 'smart card' electronic vouchers for replacing paper food vouchers using the Humansis platform. In 2021, the programme has been scaling up and our team, as well as vendors and beneficiaries, are more confident about working with this innovative modality to address food insecurity among the conflict-affected communities.



Denisa Bultasová
Humanitarian Advisor,
People in Need

The smart card is a plastic card with an NFC (Near-Field Communication) chip that works like a debit card, which can be used by beneficiaries to pay for their shopping, up to a determined amount. The card is usable at participating shops through a special mobile app that the vendor has downloaded on their mobile phone. The card also makes it possible to earmark a certain portion of the amount on the card for specific items such as food, hygiene items or

other household items. Supported households can split the purchases up as much as they want and use the smart cards in more shops for a wide selection of items. The only paper still being used is for the distribution lists that are signed by the beneficiary, confirming that they have received the aid.

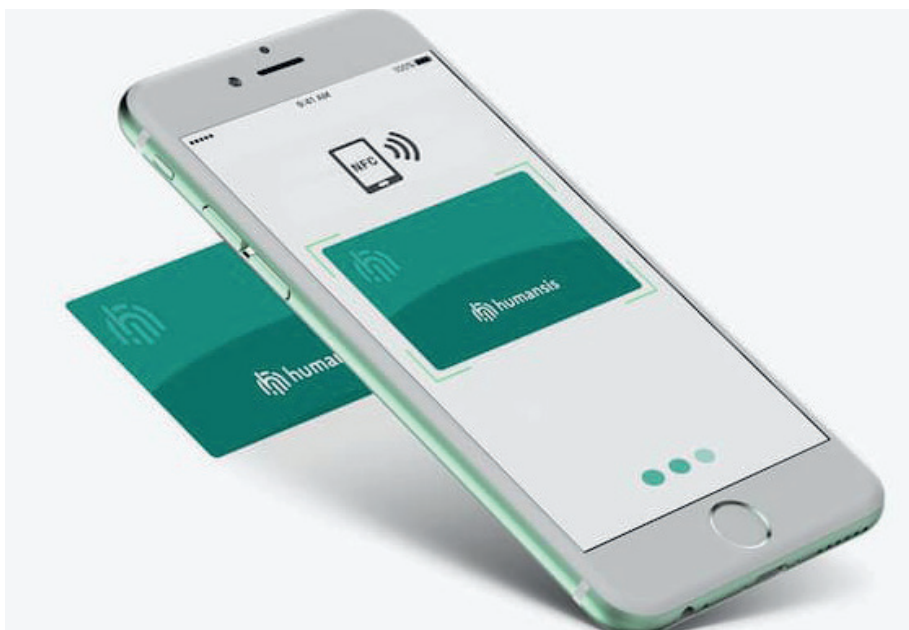
Context

A record 12.4 million people, 60% of the population in Syria are currently food insecure. Cash-based food assistance programmes, such as monthly food vouchers, are a vital and commonly used solution to support

such households. It's also a win-win solution: not only is this a more dignified way of helping families, but it also directly supports the local economy. Supported households are able to spend the money on anything they deem critical at the time. PIN has been delivering food voucher assistance in Syria since 2014 and this has allowed us to support several tens of thousands of families each year.

Implementation

One of the key advantages of the electronic voucher (or e-voucher) is its flexibility for making adjustments to



SMART-CARDS.

Photo: PIN

the amount provided to beneficiaries each month and dealing with currency value fluctuations which has been particularly important in Syria as over the last year, as food prices across Syria have soared and the price of basic items has increased by 236 percent, just as the value of the Syrian Pound has plummeted. Secondly, e-vouchers provide better data on household purchasing patterns and preferences as the programme team can check exactly what beneficiaries purchased and when. This data can then be used to inform the future design of the activities and indicators. A third advantage concerns the time and resources saved that would have had to be spent on manual collection and the reconciliation of paper vouchers and vendor invoices, since this is something that is automatically generated by the Humansis platform.

Last but not least, the e-vouchers allow for considerable savings due to the costs required for printing the paper vouchers. Paper vouchers need specific security features, such as a watermark or a hologram, to protect them from being counterfeited, so having them printed is quite expensive in many countries. In 2020, the Syria programme spent approximately 8 USD on the printing of paper vouchers for each beneficiary who received support for 8 months, whereas one smart card costs approximately 4 USD and can be used not only for the entire duration

of assistance of 8 months, but even during the next project or assistance cycle. So, the costs for smart cards are at least half as much or greater to the costs needed for the printing of paper vouchers.

During the first year of its use in Syria, both the field-based team and the software team have faced significant challenges in making the system work in such a challenging context. Many of these setbacks are understandable since the smart card module in the Humansis software was

3368
we have distributed
electronic cards to
3,368 conflict-affected
households in 13
locations.

brand new and was being tested for the first time in the field in an extremely challenging context for remote management. Additionally, we also underestimated the capacity needed to properly support the field-based teams in launching the technology. Jakub, the Head of the Humansis team, adds "the development of the software is even more challenging since we are designing one system

which is expected to serve teams based in different continents, as well as bridging different cultures and working environments. We also need to carefully select the proper solution with regard to what is needed, desired and possible." Jakub also gives an example of one of the challenges for our Syrian colleagues "We have faced quite an interesting challenge regarding the cultural context. For instance, many of Humansis' users are Arabic speakers, meaning they are writing and reading from right to left. However, this is not only about reading, since people naturally look at things in the direction in which they are used reading. The Humansis team is used to reading an excel sheet from left to right and processing it in our mind from column A, left, to Z, right, and so the software is designed to organize information in that way. So you can imagine the misunderstandings or difficulties that this could cause in interpreting data."

While we fixed the technical mistakes and learned important lessons on how to effectively train the teams and provide faster troubleshooting support to the field, some potential disadvantages should be taken into consideration by any new country or programme considering using this technology. One of them is the longer start-up time for first-time users, setting up the platform, and rolling out the vendor training. This may take time, especially when compared to less technology-intensive projects. 'The largest challenge in introducing the smart cards was the adaptation of existing procedures and early-stage errors. It took us several months to address these, but over the last few months this has improved and now we are looking forward to widen the scope of programming of smart cards that could be supported in the future,' says Hamza, a Programme Manager in North-West Syria.

Special attention should also be dedicated to certain vulnerable groups, such as the elderly or the illiterate, to make sure they know how to use the smart cards. However, a proper amount of sensitivity is also needed with paper vouchers. Furthermore, there are some technology limitations, such as access to electricity or internet, while all the mobile apps work in an

offline mode, vendors need to connect to internet at least once in a couple of days to sync the data with the web-based platform.

When it comes to procuring smart cards, they are now available on the market in most countries, but it is possible that smart cards might be difficult to be procured locally in certain areas such as Syria. 'It was not possible to purchase the smart cards locally and we had to look for suppliers in neighbouring countries, but we were able to find three suppliers in Iraq and one supplier in Turkey that could provide us with the correct type of the card' says Hussein, the program's Logistics Manager.

Achievements

Up to now, we have distributed these electronic cards to 3,368 conflict-affected households in 13 locations and provided 69 vendors with smart phones and trainings on how to operate this new system. The first surveys which are based on when the programme was still in its pilot stage reported that 64% of beneficiaries were satisfied with the smart cards, and 73% of vendors.

These figures are both quite reasonable considering that this is quite a new modality and the programme is still in its pilot stage. Since the beneficiaries are now used to this modality and have overcome the initial uncertainty about how such a novel system would work, we expect the level of satisfaction will be higher in the upcoming satisfaction surveys. Electronic vouchers proved to be ideal for cases where the assistance is provided regularly in the same area and helps to offset the issues connected to the longer start-up time. Generally speaking, smart cards can be used anywhere where paper vouchers are used, if the basic connectivity requirements can be fulfilled. Once the system has been set up, it can be easily scaled up, or the same cards can be used for a range of additional different activities.

Next steps

There are still new features that need to be explored within the smart card modality that was piloted in Syria in autumn 2021. One of these deals with a functionality that allows for the remote topping-up of smart cards. The primary

objective of this is to reduce the time our staff has to spend in areas with active conflicts which are highly insecure. This would ensure that beneficiaries can still receive the assistance. Furthermore, this will reduce the amount of work and time that is spent on distributions. The time savings would allow our field-based team to dedicate their efforts towards other key activities that will improve the quality of our assistance such as monitoring, assessments or communication with the communities. A possible downside of working remotely using digital means is the reduced amount of direct contact with people and the fact that the electronic transfers should be complemented by various community events. On the other hand, this way of working could be important to ensure that the assistance is delivered safely during the COVID-19 pandemic or in areas where access might be difficult.

Along with scaling-up in Syria, we plan to pilot this system in other countries. If you want to see short video on our e-vouchers support, check out the [story](#) of Mahmoud or have a look at this [video](#).



RAMADAN left his village in the southern countryside of Idlib along with his mother and nine other family members due to shelling and airstrikes.
Photo: Alaa AlMurie



PEOPLE IN NEED
peopleinneed.cz

People in Need is a Czech, non-governmental organisation (NGO) that has been providing aid in troubled regions and supporting respect for human rights since 1992. People in Need has since grown to become one of the largest NGOs in Central Europe. Today, its work focuses on relief and development aid, advocacy for human rights and democratic freedom, field social work, and education, awareness and information.



ALLIANCE 2015
alliance2015.org

Alliance2015 is a strategic partnership of eight European NGOs engaged in humanitarian and development activities. Besides People in Need (Czech Republic), Alliance2015 members are ACTED (France), Cesvi (Italy), Concern Worldwide (Ireland), HELVETAS Swiss Intercooperation (Switzerland), Hivos (The Netherlands), Ayuda en Acción (Spain) and Welthungerhilfe (Germany).



CZECH DEVELOPMENT AGENCY
www.czechaid.cz/en

This issue of INSPIRED was produced within the project “Building of capacities and cooperation of the Czech entities in the area of innovations within the official development assistance” supported in the framework of development cooperation of the Czech Republic.

www.peopleinneed.cz

