

INNOVATE. CREATE. CHANGE.

NEW IDEAS THAT POWER SDG PROGRESS
IN ASIA AND THE PACIFIC

PARTNERSHIP-SERIES 3

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PREFACE



In a world of complex and constant change, development solutions have to evolve—and fast. Understanding of what progress means has shifted, driven by unprecedented globalization, climate change and unsustainable pressures on environmental resources. While poverty rates have declined and social improvements have come for 700 million people across Asia and the Pacif-

ic over a decade, the region is still home to more than two-thirds of the world's poor.

We can do better and do more. The 2030 Agenda for Sustainable Development gives the world and the Asia and the Pacific region a vision of a new development paradigm, one that carefully balances the three critical elements of our economies, societies and environment. It is an ambitious plan, and realizing it will depend on our ability to keep up with the rate of change in the world today.

UNDP has taken up that challenge as a trusted development partner and service provider to countries across Asia and the Pacific. Innovation is key, and not just as an add-on but as fundamental to the way we work and what we offer the countries we serve.

BREAKING THE MOULD

UNDP's innovation journey in Asia and the Pacific has gone far. Our goal was to break the mould, disrupt conventional thinking and imagine the changes we want to see. We set out to scan for new ideas, test them, learn from those that do not work, and work with Asia and the Pacific governments and other partners

in scaling up those that do.

Realizing that entry points within existing projects are often key for innovations to take off, we diagnosed existing country programme portfolios, identifying scope for innovation and designing pipelines for projects responding to emerging trends. We devised experiments in promising specializations, such as innovative finance, big data and policy innovation labs.

The results so far have been transformative, as this collection of stories on current experiences highlights. There have been many new solutions, many firsts. Over 100 non-traditional partners have joined us. We have garnered regional and international awards as well as widespread media recognition.

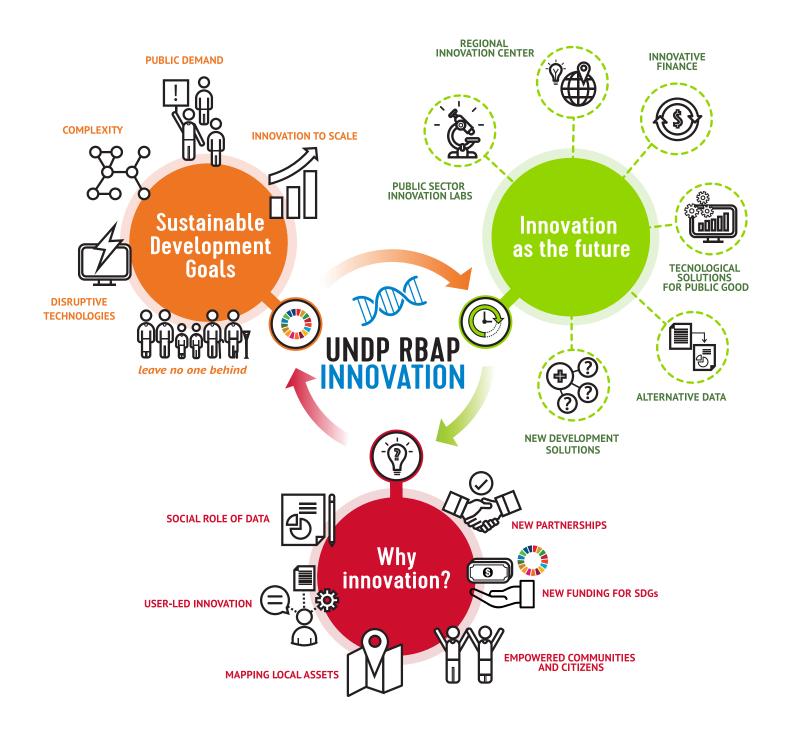
THE FUTURE IS NOW

The stories on the following pages show how UNDP is supporting governments in Asia and the Pacific in using innovation to reach people, improve well-being, provide services and mobilize financing as never before. In each case, new thinking has been the starting point, and the definition of innovation has been broad and responsive to circumstances in individual countries. Some solutions draw on cutting-edge technology; others are about behaviour change; some are a mix of both. All are producing advances that collectively cut across the 2030 Agenda and the achievement of its 17 Sustainable Development Goals.

Haoliang Xu

Assistant Administrator and Director

UNDP Regional Bureau for Asia and the Pacific (RBAP)



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AN INNOVATION JOURNEY

Several development organizations are going through challenging times. Not simply because of a shortage of funding but also because they're struggling to comprehend, engage, design or deliver in a rapidly evolving development landscape. This has led to questions about the relevance and legitimacy of these organizations.

While not being a panacea, innovation is often seen as an opportunity to recover lost ground and to become more attuned to and fit to tackle development challenges facing middle-income and low-income countries.

UNDP ASIA-PACIFIC AND INNOVATION

In Asia and the Pacific, UNDP's deliberate focus on innovation began three years ago. It may have started out as an add-on, but now it is daily practice, an integral part of UNDP's work across the region. Our goal is to seek out novel ideas, scale-up innovative solutions that are being piloted and keep driving for new ideas supported by innovative financing.

This publication is a testimony to our progress and learning so far, but it is also an indicator of how we can and will deal with future challenges by making innovation the new normal.

WHY INNOVATION?

While examples of innovative work are extremely diverse, some common lessons and trends have emerged. At UNDP, we have moved from viewing new technologies as a panacea to all social ills to using tech to empower people and overcome inequalities. By channelling innovation, our work demonstrates the importance of focusing on local priorities, relying on local assets and investing in local solutions. This local focus has enabled us to not only overcome the 'tyranny of experts' but also to identify and engage with citizen-innovators.

As a result, our role has often changed from solution provider to solution enabler, and has al-



lowed us to pay more attention to the complexity of development challenges and be more systematic about scaling up opportunities for locally driven development solutions.

This publication also highlights how this approach has brought new partnerships and new understanding associated with those expanded partnerships. We are mapping avenues for new resources and co-designing innovative financing to support new development solutions.

Importantly, our work has highlighted the importance of data. While they have undeniable value in monitoring results and measuring impact, new data have proven to be an important enabler in terms of engaging and empowering citizens and communities, and fighting gender stereotypes.

INNOVATION AND THE SUSTAINABLE DEVELOPMENT GOALS

These aspects of innovation are critical to achieving the Sustainable Development Goals, as the complexity of the challenge to achieve the SDGs will need an extraordinary level of cooperation and collaboration. To cope with disruptive technologies, and to meet growing public needs and demands for better services, we

will need funding that goes above and beyond public budgets available in the region, so we can scale up innovative solutions. Only then will we be able to ensure that we can meet the goals and 'leave no one behind'.



INNOVATION AS THE FUTURE

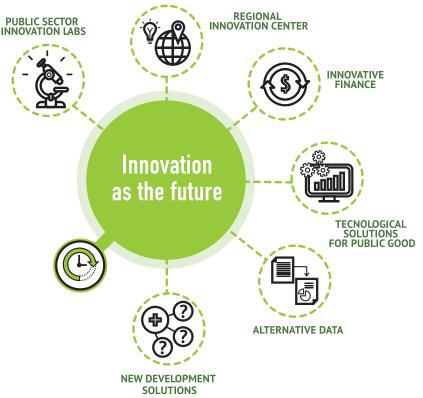
We have observed four key pivots, often complementary, around which UNDP in the Asia and the Pacific region can build its strategy. These pivots encompass public sector innovation labs, innovative finance, alternative data and leveraging new technological solutions for public good. While this list may not seem exhaustive, we aim to test and integrate 4IR—Fourth Industrial Revolution—technologies in helping governments and other partners to deliver on SDG commitments. The Regional Innovation Centre we aim to set up in Bangkok will further augment our resources to co-design, test, adapt and scale up new development solutions underpinned by artificial intelligence and other technological innovations in different countries in the region. We also will be looking to build national capacity to deploy and sustain these innovations. As someone mentioned, the closer technologies are to us, the more they are about us.

Another exciting feature and priority for us will be to nurture emerging models of distributed expertise reflecting the specialization of some UNDP country offices in fields like innovative finance and public sector innovation, among others. This model reflects our understanding that for innovations to be sustainable, they should be generated and tested on the frontline where the most development work takes place. People driving them should be empowered to innovate.

Finally, to become an organization that is sustainable and innovative, we need to ensure that out new culture embraces the 'front office' (design and implementation by programme teams) as well as the 'back office' (human resources, procurement, etc.).

We will continuously be looking at how to identify and bring in new skills, how we can adapt our organizational procedures to iterative approaches in development, and how we engage all players, be they private sector companies, funds, or other entities.

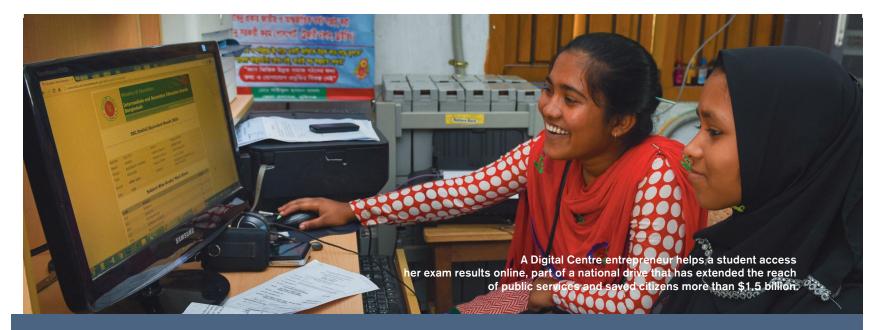
Truly exciting development times lie ahead.



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INNOVATE. CREATE. CHANGE.

New ideas that power SDG progress in Asia and The Pacific



Bangladesh

A REVOLUTION IN SERVICE DELIVERY PROMISES QUALITY FOR ALL

Among Bangladesh's 1 million teachers in over 145,000 primary and secondary schools, it took only one to come up with an innovative idea that could permanently improve the quality of teaching—and education for the country's 30 million students. Afroza Nasreen Sultana, an assistant teacher at Rangpur District School, looked at the cost-intensive nature of traditional face-to-face teacher training methods and wondered if there was a better way.

Limited infrastructure and resource constraints meant it could take up to six years to update the knowledge and skills of every teacher in the system. Sultana's solution was relatively simple: create an online platform that would connect teachers in need of guidance and training with talented, high-performing peers. This triggered development of the online Teachers' Portal, which now links nearly 236,000 primary or secondary school teachers with teacher-educators and mentors accessible seven days a week.

Sultana is on the vanguard of a revolution in public service delivery in Bangladesh, part of a new generation of civil servants reinventing how they think about their jobs. Through training initiated with UNDP support, they are learning that quality services start with considering the needs of users. Instead of rubber-stamping bureaucratic processes, they are empowered to engage with users, innovate, and improve quality and responsiveness.

In one district, a junior land officer became a local hero by building a covered waiting area for poor, aged clients, and using automation to make information more readily available, thus cutting chances for corruption. An agricultural extension officer, faced with the constraints of having only 46 field officers to advise 80,000 farmers on plant diseases, developed an online database with over 1,000 pictures of common problems. Farmers can freely consult it whenever they need, often with the assistance of tech-savvy children.

What's the big idea? Public Services

What's the difference?

NEARLY 5,300 DIGITAL SERVICE CENTRES PUT PEOPLE CLOSER TO SDGS:







GOING DIGITAL

To achieve the SDGs and its own national aspirations, Bangladesh must aim for quality public services that reach 160 million people. The country as a whole is already on the way. Recently, it moved from low to low-middle income status. Human development indicators, which reflect income, health and education, are twice the level of what would normally be expected for a nation with Bangladesh's level of per capita income.

Some part of these advances stems from a transformation unfolding since 2007, when UNDP worked with national partners to spark a drive for service innovation through seed support for pilot 'one stop' Digital Centres. These aimed at making a variety of services accessible and reliable, and without the imposition of costly inefficiencies, such as multiple trips to fill out paperwork. For the poorest citizens, the expense of travelling long distances or spending hours waiting in line instead of working can put services—even those they desperately need and to which they are entitled by legal right—out of reach.

Digital Centres now deliver over 5 million services every month.

Technology meant the centres could operate with a light footprint, requiring basic computer equipment and an Internet connection to file forms and access information. This made it relatively easy and cost-effective to establish new centres close to where people live. A further innovation was to straddle public and private elements by combining the mandate and infrastructure of the public sector, and the entrepreneurial zeal and efficiency of private individuals.

From the start, each centre was run by local entrepreneurs and located within local council offices. The councils covered the rent and equipment. The entrepreneurs paid everyday expenses such as utility charges and Internet bills, and generated revenues by providing a mix of free and fee-based services. Free public services included getting digitized land records, birth registrations, passports and applications for other government services. Fee-based private services comprised mobile financial services, insurance and job-related training.

Putting the centres in council offices took advantage of the fact that as the lowest tier of the government administration, they are familiar to almost everyone, and spread across the country. But a deliberate choice was made to keep centre operations apart from the existing government bureaucracy. Incentivized by the need to earn revenue, entrepreneurs proactively worked to attract and retain service users by offering efficiency and reliability.

By 2010, the centres had proven so popular that they went national. Nearly 5,300 now operate in every union council, municipality and city corporation, delivering over 5 million services every month. More than 300 million services have been provided since 2010, while the time to obtain them has fallen by 85 percent. In monetary terms, the centres have saved

Bangladeshi citizens more than \$1.5 billion.

An emphasis on ongoing innovation means the centres constantly evolve and improve. The introduction of banking at 1,804 of the best-performing centres, for example, gave approximately 1 million "unbanked" people their first access to savings accounts, loans and similar financial services in 2016.

In 2014, the Digital Centres received the World Summit on the Information Society Award from the International Telecommunication Union.

CULTIVATING A CULTURE OF INNOVATION

Bangladesh's national Access to Information Programme, or a2i, has propelled the expansion of the Digital Centres, and embodies the Government's commitment to innovation in public services. Situated in the Prime Minister's Office, the programme encourages a whole-of-government approach, calling on all public organizations to join a digital transformation. Common web portals now provide comprehensive information on 400 public services. More than 25,000 websites of various local and national government entities are connected through a national portal that generates over 90 million hits per month.

While some ministries were initially reluctant to digitize service delivery, the broad popularity of the Digital Centres has boosted the number of public e-services from only a handful in 2010 to over 100 in 2017, with potentially hundreds more in the pipeline. Further support comes from regular updates in laws and policies. The ame ment of the ICT Act, for example, encouraged government ministries and agencies to incorporate the latest technology for communication and improved management of government records.

All of these drivers of change and innovation will only go so far without making an equal investment in the people who will carry them forward. Towards that end, around 409,000 service providers have been trained to implement new digital services, while several thousand in key positions have gone through specialized courses designed around leading global practices built on the power of human empathy. Government officers now anonymously visit service points to stand in 'citizens' shoes'. Forced to navigate without any official or intellectual privileges, they gain critical insights to improve quality.



New skills and greater awareness have already led to 2,410 follow-up pilot innovations, running across health care and education, crops and fisheries, land rights and human rights. A Service Innovation Fund helps nationally scale up some of the best ideas, like the Teachers Portal.

A national portal for government entities generates over 90 million hits per month.

In Bangladesh's national vision for the future, freeing the country from the shackles of poverty and unsustainable development largely depends on empowering people to co-create solutions to development challenges. Momentum is gathering on the back of a decade of successful advances. With its enormous human capacity—a young population comfortable with technology and its constant call for innovation—this promise to its citizens is one that Bangladesh will increasingly be able to keep.



Ambitious in scope and agreed far away, the global Sustainable Development Goals may seem like a daunting prospect for Chinese officials managing districts and municipalities. Local demands and urgent priorities are many and multiply all the time—clean streets, air quality, better livelihoods, business development, safety—the list is long.

It can be hard to take time to understand the merits of linking local plans and actions to the global goals. Yet sustainable development is where the future of the world lies, in its careful balancing of people and the planet. Success greatly depends on China, home to a fifth of the world's population. Progress rests significantly on local officials taking sustainable approaches to providing local services, managing local economies, and caring for natural resources important to livelihoods and the quality of local life.

Towards 'localizing' the SDGs, UNDP came up with an innovative plan. If local authorities are not yet familiar with the SDGs, the goals could come to them, in ways that are relevant and make practical contributions to solving local development concerns.

THE STARTING POINT: LOCAL PRIORITIES

As a longstanding international partner in China, UNDP has provided important support to implementing past global agendas through collaboration with national institutions. Demand for that expertise is now shifting to other arenas, including some regions, where capacities and knowledge may be unevenly distributed. Further, since different regions face sometimes widely varying development issues, they need to tailor sustainable development strategies to their distinctive needs.

UNDP has worked with the Government to devise a pilot

What's the big idea? INNOVATE IN LOCAL SDG PLANS

What's the difference?

PEOPLE ARE CLOSER TO ALL 17 OF THE SDGS, PARTICULARLY:







model for localizing the SDGs, now being tested in 8 provinces covering 40 counties, and has partnered with a number of top Chinese universities to fine-tune it. The model is rooted in a core idea behind the goals—that countries including China have agreed on common objectives, but the ways of achieving those are many. The point is to move in the right directions, acting across the social, economic and environmental dimensions of sustainable development, and using the most appropriate local means.

A model for localizing the SDGs is now being tested in 8 provinces covering 40 counties in partnership with a number of top Chinese universities.

The SDG localization model diverges from some past practices. It involves exploration and mutual learning, not a set of prescriptions. It starts with local officials performing a careful assessment of their challenges and hopes for the future. This then shapes customized training for local public servants on how they can use the SDGs to strengthen local development planning, including by orienting it around sustainability.

Since officials typically work within separate departments, the sessions often provide a first opportunity for them to come together around sustainable development as an overarching vision, and to understand how different people can work together and accelerate progress.

QUALITY AND INCLUSION

The Wulong district of Chongqing Municipality in south-west China was among the first local governments to try the SDG localization model. District authorities have struggled to find a way to boost economic development in a mountainous region where poverty rates are persistently high. New ideas are needed.

UNDP experts worked closely with local authorities to first assess key challenges. Surveying local resources, it was clear that good forest coverage, scenic vistas and limited pollution would lend themselves to developing eco-tourism, which could also become a source of jobs for local people with otherwise limited livelihood options. Designed carefully, the process could minimize environmental impacts.

In the training that followed the assessment, local authorities discussed SDGs on ending poverty, decent work, and sustainable consumption and production, and how these issues relate to each other and might be addressed comprehensively. Initially, they emphasized a more traditional approach geared primarily towards boosting investment to develop ecotourism. UNDP experts stressed the benefits of a wider perspective

on not just the amount of rapid development, but its quality, sustainability and inclusion of local people, particularly those in poverty—all concepts integral to the SDGs.

Lili Xie, the District's Development and Reform Commission Director, describes the training as "linked to the most pressing and challenging issues Wulong is facing, providing very good guidance as we work on locally implementing the Five-Year Plan and promote sustainable development."

Subsequently, the district requested—and financed—a full report on introducing all of the SDGs in local planning as well as the district's current status on each goal. A process is now underway of integrating these findings in local planning, such as through establishing village ecotourism pilots, and managing local forest, land and water resources to strength prospects for ecotourism.

INTEGRATING THE ISSUES

The city of Deyang is located in Sichuan Province. It too has piloted the SDG localization model to address its own very different issues. A long legacy of manufacturing heavy equipment has left it with higher levels of income but also intensive pollution. The aftermath of a devastating earthquake in 2008 required significant reconstruction.

Traditionally, the city has taken on issues such as economic growth, cleaner industry, better quality of life and environmental renewal piece by piece. Through the SDG localization assessment and follow-up dialogue with local officials, awareness grew of how local resources might be more effectively used through closer coordination and integration of different initiatives.

Local officials are now considering developing a forward-looking strategy acting on several SDG aims, such as

Across 10 pilot SDG zones, comprising clusters of cities, city managers will innovate and scale up proven strategies.

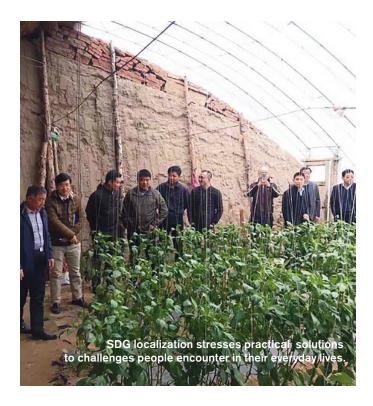
sustainable and inclusive industrialization, and low-carbon development. Plans are under discussion, for example, to develop industry to produce goods required for emergency preparedness and response. This would build on local disaster recovery experiences as well as the manufacturing tradition, but as a relatively clean business. The industry would create jobs, and could be accompanied by measures to educate local people on emergency preparedness, given that Deyang remains vulnerable to earthquakes.

A NATIONAL COMMITMENT TO INNOVATION IN SDG IMPLEMENTATION

The SDG localization model complements China's SDG Innovative Pilot Zone initiative, the first overarching national move towards SDG implementation. Ten pilot zones, comprising clusters of cities within provinces, are expected by 2020.



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Jiangsu Province has taken a lead in setting up a management centre to oversee all SDG work, and is developing legislation to smooth SDG implementation by reducing bureaucracy and improving government responsiveness.

Across the 10 zones, managers in each city will be encouraged to innovate and scale up proven strategies. A national expert committee guides the initiative. UNDP serves on it as the only participating international organization, and also acts as an advisor to Jiangsu Province as well as to two other pilot zones, Guangxi Province and the city of Shenzhen.

As the process moves ahead, UNDP will systematically share expertise and highlight new possibilities for localizing the SDGs, such as the use of big data as a complementary poverty measurement tool. Many other opportunities for innovation lie ahead, through technology as well as through the commitment of local officials to adopting new development concepts and tools. The SDGs are ambitious global goals, but they are also about sustaining the kinds of inclusive, well-off communities to which people everywhere aspire.

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India

REACHING EVERY CHILD WITH SAFE VACCINES

Each year, more children are born in India than anywhere else—27 million all told. Their chance to survive and thrive depends heavily on vaccination against illness, death or lifelong disability.

It's a mammoth task. Immunizing all newborns plus 126 million children under five and 30 million pregnant women who also need protection requires 650 million doses of vaccines annually. These must flow through 27,000 distribution points before they are used in 9 million vaccination sessions. They must cover India's diverse terrain, reaching mountains, deserts and remote islands, among other places. They travel through a supply chain involving planes, trains, buses, motorbikes and people on foot.

Keeping track of the world's largest immunization programme used to happen on paper. Inevitably, health-care staff did not always know where vaccines were. Or if there were enough vaccines. Or if vaccines had been reliably stored at temperatures that keep them viable.

It was a problem tailor-made for technological innovation—and in 2015, the Ministry of Health and Family Welfare, supported by UNDP, began to roll one out: the Electronic Vaccine Intelligence Network, eVIN for short. It is making health care more efficient and better in quality, protecting the futures of millions of women and children.

TRACKING AT EVERY LEVEL

UNDP, with a significant grant from Gavi, the Vaccine Alliance, and with support from the Government of India, brought to the project its experience as one of the world's largest procurers of health commodities and its expertise in the supply chains essential to distribution. For vaccines to reach and protect children, they must move through a cold chain that starts where vaccines are produced and extends all the way to the final shot in a child's arm. At each point, people who

What's the big idea? TRACK ALL VACCINES

What's the difference?

60 PERCENT OF CHILDREN UNDER TWO ARE CLOSER TO SDGS:







manage the cold chain have to know not only where vaccines are, but also if they have been stored at the right temperatures to prevent spoilage.

Nearly 10,500 vaccine stores and cold chain points each month log over 2 million vaccine transactions on eVIN.

The eVIN system, for the first time, makes it possible for managers in India to see and monitor the cold chain as a whole. It does this by equipping all vaccine and cold chain managers with smartphones and an app that feeds real-time data into a cloud-based server linked to a web interface. After every vaccination session, for example, updates on vaccine supplies and usage rates are immediately accessible for review by programme managers even if they are located far away from the vaccination site. Other data feed in from temperature loggers that monitor stored vaccines. If a risk arises, such as from a power cut, the loggers immediately send an SMS to managers, who can take quick action to protect the vaccines.

Dr. Pradeep Haldar, the Deputy Commissioner (Immunization) in the Ministry of Health and Family Welfare, remembers how the manual system could only generate a

picture of vaccine use and storage at the state level, with limited information of what was happening in districts and local communities.

Today, he says, eVIN means seeing the entire picture. "It is the state level, the district level, the block level, the primary health centre level and every cold chain point that the state has."

eVIN has now reached all 371 districts in 12 states that have 60 percent of Indian children under age two and have traditionally struggled with some of the biggest gaps in immunization. Nearly 10,500 vaccine stores and cold chain points have adopted digitized vaccine inventories and record-keeping. Each month, they log over 2 million vaccine transactions on eVIN, along with 80 million temperature samples.

With the cost of rolling out eVIN at less than 2 percent of the funds India spends on procuring vaccines, the return on investment is already obvious. Vaccine availability has pushed past 95 percent, from 80 percent. Stockouts have fallen by 70 percent, while the average time to replenish supplies has shrunk to two days from five.

EMPOWERING PEOPLE TO STRENGTHEN SYSTEMS

If eVIN has been innovative in introducing new technology, its success also rests on emphasizing two other critical ingredients: people and processes. At the forefront of India's immunization

efforts are thousands of cold chain handlers. Even the best technology would fall flat without getting them on board.

Before the eVIN roll-out began, UNDP helped states assess their preparedness through surveying cold chain networks, and elaborating details on personnel and processes. This provided the basis for training that has accompanied each stage of introducing the new system. More than 17,000 government staff, including vaccine store keepers, data entry operators and cold chain handlers, have taken part.

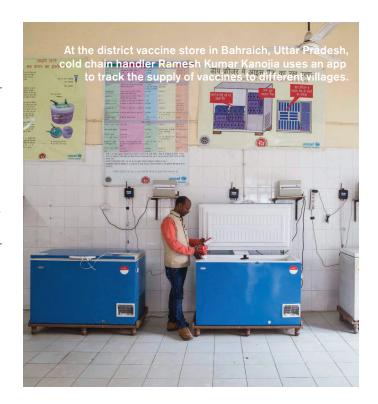
State immunization systems were further strengthened by deploying vaccine and cold chain managers in all districts. They helped in estimating vaccine requirements, supervising cold chain handlers and coordinating with cold chain technicians. Specialized assistance guided the introduction of the Rotavirus vaccine and the reallocation of cold chain equipment to meet new requirements.

Dr. Nandini Pathak, a district immunization officer from the state of Madhya Pradesh, points out that 50 percent of cold chain handlers are above the age of 50. Many had never used a smartphone before. Training coupled with the app's simplicity have been critical, allowing nearly 100 percent compliance with entry recording.

"When I first got the smartphone, I was wondering if I would be able to do it. I was very nervous," recalls Jesamma John, a cold chain handler at in the state of Rajasthan. "But I got the confidence. Now we know the vaccine condition even while sitting at home. If the alarm goes, we can call staff to go and check the condition."

TRANSFORMING SERVICE DELIVERY

Initially, financing from Gavi helped catalyse development of eVIN, but financing is now embedded in the health budgets of state governments, a clear endorsement of the system's success. Other recognition has come through regional and national awards. eVIN won the prestigious GSMA Asia Mobile Award 2017 for an Outstanding Mobile Contribution to the Sustainable Development Goals. In India, eVIN was selected as one of the best practices in health at the National Summit



on Good, Replicable and Innovative Practices by the Ministry of Health and Family Welfare

Interest in the system has taken off in other countries as well. Delegations from five countries—Bangladesh, Indonesia, Nepal, the Philippines and Thailand—came to India this year to learn about eVIN and how they might set up similar systems.

Within India, the Ministry of Health will soon begin rolling the system out across the entire country, covering all 36 states and union territories. Its potential in ensuring the safe and predictable supply of vaccines has been proven.

As important, through the systematic collection and open sharing of data, eVIN has brought about an unprecedented level of transparency and accountability for providing health care. On eVIN smartphones and computer screens, and among the people who use them, a transformation in service delivery has begun. Reaching every child with vaccines, always an essential commitment to human life and well-being, is now also a measurable achievement.



Indonesia

HARNESSING TECHNOLOGY AND TRADITION TO FILL FINANCING GAPS

Living in the arid hills of the island of Sumba—in one of poorest parts of Indonesia—Ibu Veronica used to walk 12 kilometres every day to the well closest to her village. The five litres of water she could collect and carry home were not enough for cooking, let alone for washing.

So her life changed significantly for the better when a solar-powered pump came to her village. In a community with no electrical or other sources of power, the pump provides a steady and readily available supply of clean water.

"We have enough water to shower every day, cook and grow vegetables, and I don't have to walk a long way to fetch it," Veronica says. She and her friends have since been exploring new livelihoods, such as fish processing. Food supplies are more secure, and children stay in school instead of being sent to fetch water.

If the solar-pump technology can be replicated over a large area, it will start to resolve a longstanding disparity in the province of East Nusa Tenggara, where Sumba is located. Only

40 percent of households have safe access to water there, even as the area depends heavily on agriculture and is increasingly vulnerable to drought and other markers of climate change. All of these elements drive and sustain high poverty rates.

UNDP works with the Government of Indonesia, with funding from the Global Environment Facility, to help vulnerable communities across East Nusa Tenggara improve water supplies. Need is great and resources are limited, however.

So, while encouraging the use of traditional channels, such as expanded public budgets for water services and additional infrastructure financing through a state-owned regional bank, UNDP has also collaborated with a variety of partners to explore new funding options offered by technology. One of the most recently built wells, in the village of Napu, was not paid for by international donors or public money, but through the generosity of ordinary Indonesians mobilized by a crowdfunding campaign.

What's the big idea?

ENGAGE MORE DEVELOPMENT INVESTORS

What's the difference?

CROWDFUNDING, SOCIAL ENTERPRISES AND ISLAMIC FINANCE PLACE PEOPLE CLOSER TO SDGS:







HELPING EACH OTHER

Close to the heart of many Indonesians is the traditional notion of *gotong royong* or helping each other. Traditionally, it meant members of a community gathering to accomplish a task, such as fixing a neighbour's home or building a bridge. Rapid urbanization has left many of these activities behind, but the spirit of *gotong royong* remains. Amid growing prosperity, there are more opportunities to act on this principle, while technology can easily bring together those who have and want to give with those who are in need.

For the Napu well, UNDP drew together diverse partners to launch its first crowdfunding campaign in Asia and the Pacific, #BringWater4Life. Actor Reza Rahadian and jazz singer Eva Celia championed the cause. A local NGO, Koppesda, was charged with construction. An online appeal went out across social media and at kitabisa.com, a website dedicated to online funding for social causes.

Within two months, 398 people responded to a crowdfunding campaign, exceeding the fundraising target for the new well.

The campaign told a compelling, heartfelt story, asking people to image walking barefoot for hours over treacherous terrain for a glass of water. It appealed for just \$10 to break the cycle of poverty and offer a better future for the people of Napu. Within two months, 398 people responded, exceeding the fundraising target by providing \$26,000 for the new well.

"We were able to influence people to be aware of this issue. And there is a sense of ownership and solidarity that is shared by everyone involved," says Rahadian.

A second crowdfunding campaign in mid-2017 raised funds from 216 donors to protect the iconic—and highly endangered—Sumatran tiger. In the works is a crowdfunding microsite hosted by kitabisa.com that will field ongoing calls for support related to achieving the Sustainable Development Goals.

CAPITALIZING ON ALTERNATIVE FINANCE

Crowdfunding is just one innovation in mobilizing new sources of finance for development, now needed as never before. The Asian Development Bank recently estimated, for instance, that infrastructure needs alone in developing Asia and the Pacific will exceed \$22.6 trillion through 2030.

In Indonesia, the philanthropic tradition presents enor-

mous opportunities. Philanthropic support already totals \$600 million per month. Among young and tech-savvy Indonesians, the Internet is a natural forum for these activities. By 2025, World Bank estimates suggest that crowdfunding could reach \$96 billion globally.

In the pipeline at UNDP is an alternative finance lab that will back the sharing of successful new financing strategies with the Government of Indonesia, as well as with international donors and other middle-income countries. Some prospects with strong possibilities are already advancing. In the district of Musi Banyuasin, for example, a sovereign wealth fund is being established to collect revenues from extractive industries to support sustainable development.

A blended fund for investing in social businesses in agriculture is a resource for enterprises that are too big for microloans but not developed enough to access loans from banks.

An arena with significant potential is social finance, which involves investing in enterprises that produce social and environmental benefits as well as profits. A recent impact and investment event organized with the Indonesian financial regulator and supported by Angel Investment Network Indonesia (ANGIN) and UNDP drew more than 200 participants who exchanged ideas and information on emerging trends.

A related collaboration between UNDP, Pulse Lab Jakarta and ANGIN has trained teams of young entrepreneurs to pitch their ideas on sustainable cities to government representatives and social impact investors. One team has already won seed funding for an app that enables people with disabilities to find public facilities, based on maps generated through crowdsourcing data.

With ANGIN, UNDP is also a partner in CONNECTOR.ID, which links social enterprises to capital from a range of sources such as banks, venture capital firms, angel investors, foundations or crowdfunding sites. A blended fund for investing in social businesses in agriculture, for instance,

is a resource for enterprises that are too big for microloans but not developed enough to access loans from banks. In parallel, the enterprises are helped with developing skills to manage the financial and technical aspects of their business so that over time, they can prepare for other sources of finance.

A NEW TAKE ON TRADITION

As frontiers for finance continue to open, UNDP is working with its partners to advance a new take on some traditional sources, such as zakat, the mandatory giving to the poor and destitute that is one of the five pillars of Islam. Each year, across the Muslim world, zakat adds up to as much as \$1 trillion. With Indonesia the largest Muslim-majority country, zakat could become a powerful form of wealth transfer to people left out of development.

The National Board of Zakat or BAZNAS, responsible for the disbursement of formal zakat contributions, has teamed up with UNDP to see how it can back achievement of the SDGs.



18



An initial contribution of \$350,000 has already gone towards a micro-hydro power plant in Jambi province, improving access to electricity in an area with a large deficit. The partnership also aims to encourage giving in part by putting collecting institutions under the supervision of the national financial services authority and thus increasing their credibility.

Technological advances such as online banking and mobile money are making it increasingly easy for people to contribute and distribute zakat. Planned rollouts of innovative Islamic finance instruments include exploring a virtual trust fund facility to direct global Islamic funding into SDG measures, and a platform for social loans and crowdfunding.

The high ambitions of the SDGs are achievable, and the sources of finance are there, with the right instruments and incentives to channel new resources to the goals. As singer Eva Celia commented at the close of the Napu crowdfunding campaign, "I hope this is just the first out of hundreds of other steps we can take for positive change in Indonesia. This is our home and we have to make the best of it."



★ Myanmar

FOR RURAL WOMEN, AN APP AND AN AIM FOR EMPOWERMENT

For a poor and rural woman in Myanmar, isolation can be a lifelong disadvantage—even a danger. It often means not having the knowledge and skills to improve livelihoods and escape poverty. Or suffering domestic abuse without realizing that help is available.

This has been a perennial problem, for generations. But now a solution is at hand. It's as simple as an inexpensive mobile phone and an app, designed by rural women, for rural women. Cellular signals jump across distances and surmount isolation and information gaps in ways never possible before.

More than a decade ago, Daw Cho Aye, a small betel nut grower in Mon State, joined one of a number of village selfhelp group supported by UNDP. The groups helped women solve common challenges, such as getting access to fertilizer for more productive agriculture, and to banking services for credit. It took years for Daw Cho Aye to collect enough confidence through participating in the group, but today, she has no hesitation in arriving at local government offices with

demands for women and her community.

Nor did she shy away from a leap into the world of technology in 2015, when she and other self-help group members were asked to help develop the app. Called iWomen Inspiring Women, it connects rural women across Myanmar to higher levels of knowledge, self-confidence and leadership skills. "The app (lets us) express ourselves, pursue our ambitions, learn and share with others what we have learned," Daw Cho Aye says. "Our vision is to build a national network that receives the recognition of the whole country and that can be relied upon by the community."

Says Nin Sar, one of thousands of new and avid users: "As long as iWomen is with us, we do not need to be scared. I have become more inspired—I have more ideas for my life." She ticks off a list of helpful subjects she has learned about: land laws, gender equality and up-to-the-minute commodity pricing for her crops.

What's the big idea? INSPIRE AND INFORM RURAL WOMEN

What's the difference?

AN APP BRINGS 9,000 WOMEN CLOSER TO SDGS:







HUMAN-CENTRED DESIGN

Just a few short years ago, a mobile phone in Myanmar cost \$1,000 or more, explaining why only a tiny 1.5 percent of people had one. But costs plummeted quickly and usage soared, to over 60 percent of the population by 2016. Even people in rural areas now have access to a dynamic world of information through mobile technology.

As a longstanding supporter of rural women in Myanmar, UNDP has partnered with the May Doe Kabar National Network of Rural Women to implement a series of programmes to back their leadership in communities, empower them through legal awareness and stop the scourge of gender-based violence. The network links 22,000 women members of 2,000 local self-help groups, now present across eight states.

Leaders of the groups are often on the forefront of pushing against traditional gender boundaries and norms, despite resistance in families and communities. Many have said that one of their biggest sources of inspiration and motivation to keep going has been meeting with women facing the same issues in other places. But physical meetings occur only so often and involve only a few women at a time. Broader and more regular links required technology—and innovation. Enter the iWomen Inspiring Women app, the brainchild of a group of tech women in Myanmar, rural women members of the May Doe Kabar network and passionate UNDP innovators.

The beta version of the app rolled out in 2015, developed through a human-centred design process strongly rooted in

engagement with end users. During an intensive testing period, the app went through four rounds of review by rural women users, helping make it fast and intuitive to use. Testers rated the functions they liked or did not, developed an app motto, suggested content and added audio messages to include women who are not literate.

A iWomen survey on domestic violence encouraged over 1,000 women to share stories, information now being used to shape national policy on the issue.

App functions, named by the testers, include "Be Inspired," with stories from women in Myanmar and abroad, "Be Knowledgeable," with useful resources, "Be Together," with a locator for other women's groups, and "Sister Apps," with a comprehensive list of Myanmar language apps, including news streams from all major national media.

The "Talk Together" feature allows users to interact and exchange questions and answers. A monthly theme takes up topics such as ending violence and managing money wisely—a predictable feature that encourages users to regularly check in for new and useful information.

CONNECTING 9,000 RURAL WOMEN

While the app was being developed, UNDP developed new connections with media providers for the best content to populate it. They included the BBC "Young Bright Stars" Radio Programme, which attracts 8 million listeners with weekly stories of inspiration of people below the age of 30, and the Mizzima News TV Programme, which produces features on women leaders. Collaboration among Myanmar cartoonists, award-winning Facebook sticker designers and rural women leaders produced a cartoon series and set of stickers with empowering messages.

Part of the rollout also centred on helping women gain skills to use the app, particularly those who had never operated a smart phone. The iWomen app team, a series of young volunteers and a set of experienced rural women fanned out across communities to offer over 200 training sessions to nearly



5,000 women in eight states.

Some problems arose along the way, but the iWomen team tackled these creatively. To address the lack of connectivity and equipment in some areas, particularly poorer ones, app content can be downloaded and read offline, where it can also be shared by multiple users. A free iWomen hotline provides technical assistance. And to lower barriers to obtaining phones, an agreement has been struck with a phone retailer to offer discounted devices to May Doe Kabar members, along with an optional monthly payment plan.

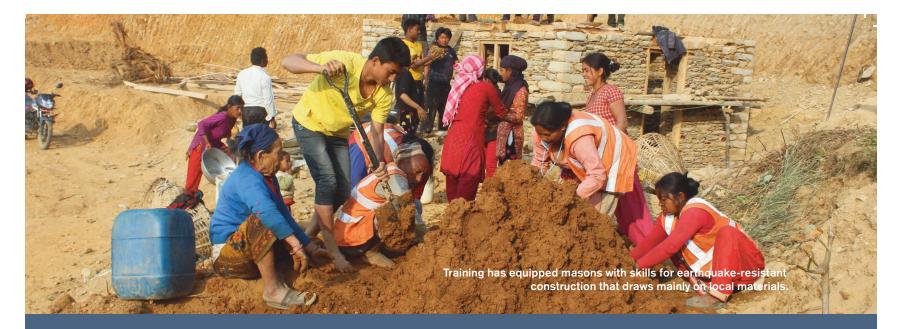
In 2015, its first year, the app attracted 800 initial users. Rapid take-off meant that by 2017, over 9,000 people were tapping into it. The eventual goal is to link 10,000 members of the May Doe Kabar network as well as the wider pool of rural women at large.

TECHNOLOGY IS IN OUR HANDS

Before reaching its current form, the app passed through 10 iterations, but new uses are still constantly evolving. At the end of 2016, during the international 16 Days of Activism to End Violence against Women, for example, iWomen ran a survey asking users about domestic violence—an issue where data often don't exist. The survey was intended as a pilot for future data-gathering exercises on issues central to gender equality.

In response, over 1,000 women shared stories on gender-based violence. The Myanmar Department of Social Welfare is now using what they said about the frequency of violence and its most common forms to shape a Prevention and Protection of Violence Against Women Bill and related policy measures, and as a basis for working with other ministries to encourage them to take the diverse measures required to stop and respond to violence.

"We have technology in our hands now," exults Daw Nyo Nyo San, a user who lives in Shan State. A widowed mother of three, she farms for a living, but women's leadership has become her passion. Her biggest dream is to continue seeking out technologies for rural women's development. "We know how to establish networks for support," she says. "As rural women, we help each other work for a brighter future."



Nepal

FROM BRICKS TO APPS, LOCAL CREATIVITY MITIGATES THE COSTS OF CRISIS

The earth moved, violently, and in seconds, nearly a million homes were damaged or destroyed. Centuries old buildings made of wood crumbled. Clouds of dust hung over mounds of debris.

For those who survived the 2015 earthquake, the aftermath was one of trauma and a struggle to survive. At first, those with no homes found shelter only in makeshift tents or by huddling under tarps as rains came pouring down.

It took eight months before Sunita Rumba could return to her village after being displaced to the outskirts of Kathmandu. Every home in her community had been damaged or destroyed. Her own, tilted on a severe angle, was unsafe. She and her family initially lived in a tin shed.

So it was with great relief that she joined a UNDP-supported programme training people on making a new kind of earthquake-resistant bricks to rebuild their homes. It was an opportunity not only to regain her own home, but also to earn an income from selling the bricks while contributing to a safer community.

"At a time when the earthquake had destroyed everything and our economic condition was deteriorating, this programme meant we were able to establish ourselves as entrepreneurs," she says. "All of us have to rebuild our homes. Now they can be earthquake resistant and also affordable."

The bricks are made from stone dust and cement mixed with suitable soil that is readily available from the area around Sunita's village. Manufacturing them requires only simple tools. But they apply a sophisticated innovation—a carefully engineered interlocking structure that allows them to fasten tightly to each other. Steel rods held in place by cement paste run through the centres. Houses built from them have a much lower chance of falling or cracking if another earthquake strikes.

What's the big idea? REBUILD TO PROTECT PEOPLE AND THE ENVIRONMENT

What's the difference?

SAFER DWELLINGS PUT PEOPLE CLOSER TO SDGS:







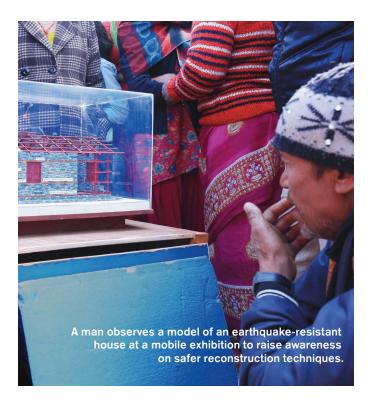
BUILDING FOR RESILIENCE

Nepal is situated in one of the most seismically active regions of the world. But this is just one of the factors that make its people vulnerable to crisis. Poverty rates are high, and the mountainous terrain hinders travel and communication, access to services and economic opportunities. A disaster like the 2015 quake leaves many people with few or no resources to cope.

The quake was a tragedy and, as the worst of its kind in several generations, a wakeup call to build differently so that people and their dwellings will be more resilient to risks. A home that collapses may not just kill or injure its residents, but set off a long chain of events that can include loss of education and livelihoods, vulnerability to gender-based violence, food insecurity, the destruction of bonds that sustain communities and so on. The effects can extend across generations, fuelling development deficits even beyond the immediate costs of recovery, and putting national aspirations to achieve the Sustainable Development Goals out of reach.

Nepal cannot yet afford the costly, high-tech engineering that protects against earthquakes in some parts of the world. But it does have local innovations—and a national commitment to applying them to safeguard and accelerate its development. In the recovery from the earthquake, UNDP has worked with national engineers and experts on a series of techniques, like the interlocking bricks, that are safer, use local materials and help preserve local environmental resources.

Several of these innovations now feature in the national



catalogue of officially tested and endorsed construction techniques. Besides the interlocking bricks, they include the random rubble technique, which uses stones and mud supported on both sides by galvanized iron wires and mesh. The technique is low

in cost, since the stones and mud can readily be found in rural areas, and the wires are easy to transport over long distances. It avoids the traditional reliance on wood from forests that are already under severe pressure from overuse.

Another technique involves compacting broken bricks and rubble with soil, sand and cement. This recycles what would otherwise be waste materials, and achieves a level of strength comparable to normal bricks. So-called debris blocks can then be used for construction resilient to quakes through vertical and horizontal supports such as rebar or galvanized wire.

Adopting new building techniques depends partly on availability and affordability, with both considerations an integral part of innovations supported by UNDP. Uptake also advances through supportive building codes that require people to make construction safer.

Three municipalities are implementing an electronic building permit system, known as e-BPS, with plans in place for wider replication. Building permits are filed and monitored on the web, where a system checks compliance with building codes and by-laws. It rejects applications that do not comply, reducing the chances of human error and manipulation. The system allows quick access to data on applications per ward, types of buildings, the status of buildings and so on, information essential to ongoing efforts to mitigate and prepare for earthquakes and other risks.

AN URGENT AND LASTING CONTRIBUTION

In the immediate aftermath of the earthquake, there was enormous pressure to assist millions of people in dire need, and quickly. But even in those circumstances, innovation found a place. As recovery from the quake moved forward, and the imperative to assess building safety became acute, UNDP formed a partnership with Microsoft to tackle a longstanding challenge that had never been satisfactorily resolved: how to digitize record-keeping in disasters.

Initial collaboration with the Microsoft Innovations Center in Nepal centred on a plan for engineers to conduct safety assessments by carrying laptops, GPS devices, cameras and an internet dongle. All of this equipment would have been costly, at around \$2,000, and hard to lug to remote locations

across difficult terrain. Drilling deeper, working around the clock in a marathon three-day session, a team of innovators came up with a better solution: an app that could run on cheap, easy-to-carry mobile phones.

Through an app developed with Microsoft, over 2,000 safe demolitions took place within months of the quake.

The app taps into the phones' GPS capabilities, which allowed engineers to take precise coordinates for each building. They recorded property owner details and phone numbers, took pictures of the damage, and, where necessary, secured signed authorizations for demolition. Other functions included calculations of the volume of debris and the time removal would take, as well as the identification of hazards such as medical or biological waste. This information guided the order and sequence of the work, and any necessary protections. All data were stored in the cloud, making them secure and readily accessible among field staff as well as those overseeing the entire recovery effort in Kathmandu.

Within months of the quake, over 2,000 safe demolitions had been conducted, and \$11 million worth of recyclable materials reclaimed. Further, the demolition app helped people regain their livelihoods by managing nearly 800 community members enrolled in a cash-for-work initiative to clear communities of debris. Each worker was given a card with a barcode, which engineers scanned to track attendance and earnings. Data were uploaded through the app, facilitating timely electronic payment transfers.

As important as these accomplishments were, the app has even greater potential. It could transform practices in disaster response, offering an unprecedented quantity of readily accessible data to inform recovery as well as the shift to long-term reconstruction.

It could also be a major step towards moving beyond the rudimentary, often paper-based record-keeping systems still prevalent in poorer countries like Nepal. A similar approach could be used for census data, property records, and many other issues. More accurate and transparent records would protect the rights of individuals, and guide strategic development choices propelling the significant advances demanded in the era of the SDGs.



Papua New Guinea SEND A TEXT, STOP CORRUPTION

What's the big idea? MAKE IT EASY TO REPORT CORRUPTION

What's the difference?

SMS MESSAGES TAKE PEOPLE CLOSER TO SDGS:







OVERCOMING A BARRIER TO DEVELOPMENT

Corruption has been a steep barrier to development in Papua New Guinea, draining off resources that people need for health, education, infrastructure and other essentials. Among the 175 countries on Transparency International's Corruption Index, Papua New Guinea ranks 144th. The need to curb corrupt practices has long been clear; how to do so has been more complicated.

UNDP has worked closely with national partners in supporting the reform of public financial management. The adoption of integrated financial management has put greater controls in place towards improved accountability. Phones against Corruption complements these broader strategies by engaging the thousands of civil servants who steward public resources each day and may be the first to catch suspect practices.

As a staff member of the Internal Audit and Compliance Division in the Department of Finance noted: "People like police, Ombudsman's Commission, auditors, Auditors General, we are looking at the same fellow here...the same giant. How are we going to tackle this fellow? Phones against Corruption is another way...of fighting the big giant."

Reporting corruption by text message is a simple but effective solution in a country where more than 40 percent of people have a mobile phone, but broadband access is still fairly limited. No Internet access is required, nor is it necessary to

download an app. SMS costs are prepaid, and phone numbers are encrypted so they remain anonymous. Even the most basic mobile phone will do as a device.

Users can select either TokPisin, a widely spoken language, or English. Once a text message is sent, a series of questions prompt users to report where and when the case occurred, if financial resources are involved and a brief description. The exchange ends with feedback on reporting and case progress—crucial to building trust among users that reports are taken seriously.

WHISTLEBLOWERS MAKE A DIFFERENCE

Phones against Corruption began as a pilot among 1,400 staff in the Ministry of Finance. It was part of a push for innovative ideas to tackle corruption in the disbursement of funds to subnational governments for implementing the Services Improvement Programme. In the roll-out of the initiative, workshops, live demonstrations, and regular emails and newsletters encouraged people to use the system.

As early adopters saw that reports were being scrutinized and acted on, confidentially, word spread. An independent survey confirmed that 90 percent of users were willing to use the system again; 76 percent were confident that action would be taken by authorities. Almost 90 percent of reports have



come from provincial areas, where corruption may be more pervasive due to a perception that it is harder to get caught there than in the capital.

Notions like that might not be around for long, however. The courts are currently hearing five serious cases of corruption and have delivered judgements on two involving the misappropriation of \$2 million in public resources. Another 250 cases are under investigation, covering a variety of provincial and district administrations, the police, correctional services, the electoral commission, the National Broadcasting Commission, several universities, and departments including health, education and foreign affairs.

SCALING UP NATIONALLY AND BEYOND

The proven merits of Phone against Corruption have convinced the Department of Finance to scale it up. A first step has been developing a robust system to manage large flows of data. As that comes online, plans call for extending the system to 20,000 staff in the national and subnational offices of 43 departments.

Recognition has also come from outside Papua New Guinea. Several neighouring Pacific countries have expressed interest. The Solomon Islands is already moving forward with its own adaptation—a system for reporting all kinds of crime, based in the police department.

The courts are hearing five serious cases of corruption and have delivered judgements on two involving the misappropriation of \$2 million in public resources. Another 250 cases are under investigation.

In 2016, Phones against Corruption received a regional Govinsider Innovation Award as the best citizen engagement project. Siim Sikkut, who chaired the judging panel, referred to the initiative as "inspiring," and hope it would encourage "public servants across Asia to continue innovating, and push the boundaries of public service delivery."



▼ Viet Nam

CAMPAIGNING FOR A 'NEW' NORMAL

Imagine men doing all the housework. Washing dishes. Purchasing groceries. Cooking. Answering questions from the kids about why only Dad takes them to school. Preparing dinner while Mom enjoys an evening out drinking with her friends.

Or imagine the sinking look of dismay on the face of a 55-year-old man, told by his 30-year-old female boss that it is time to retire. His qualifications are impeccable. His health is perfect. The office would not be where it is today without him. But the law requires him to leave—five years earlier than his female colleagues.

Normal? Yes—for women across Viet Nam. But might the normal in fact be...abnormal? That's the provocative question asked by a novel campaign that cleverly uses role reversals to challenge longstanding assumptions about gender roles.

And in thinking about the 'abnormal' normal, a further challenge: What actions can people from all walks of life take to correct the imbalance? To create a 'new' normal, one grounded in gender equality?

CHANGING MINDSETS

As is the case in many countries, Viet Nam has made progress on gender equality. It has a law on gender equality, legal sanctions against gender-based violence, and a National Strategy on Gender Equality that sets a minimum target of 35 percent for women's representation in elected office, among other measures. Yet as is also true in many countries, stereotypes and gender norms continue to hold back aspirations for change.

At 13 of the nation's largest universities, 30,000 students took part in activities aimed at eliminating gender prejudice.

What's the big idea? CHALLENGE GENDER STEREOTYPES

What's the difference?

PEOPLE ARE CLOSER TO SDGS:







Longstanding, mostly unquestioned norms confine women and men to certain roles, positions and careers, for instance. Few women reach senior government positions, while women are still legally required to retire at age 55, compared to 60 for men. Laws to curb domestic violence only go so far when discriminatory gender norms continue to pressure women not to report abuse. These shortfalls deprive women of their rights—and limit their contributions to a more inclusive, sustainable society and economy.

UNDP has been a longstanding partner in Viet Nam's efforts to put in place laws and policies essential to advancing gender equality. But since mindsets matter so profoundly for change to take root, it has also teamed up with UN and national partners to shine a spotlight on discriminatory stereotypes and behaviours.

In asking "How abnormal is the normal?", the #HowAbnormal campaign deliberately disrupts how people normally think. Can women be 'fit' leaders? Should people use sex-selective abortions because of the preference for sons? Should violence and harassment be tolerated? Is it right that women are solely responsible for childcare, while men engage in 'manly' activities such as drinking and sports?

These are some of the conversations that the campaign has sparked across the country, particularly among young people. In films, at universities, in online pledge drives and other forums, they have brought energy, creativity and innovation into an effort that could transform the 'norm' for an entire generation.

EMPOWERING A NEW GENERATION

Throughout 2016, the #HowAbnormal campaign targeted both men and women through a variety of communications channels. As a launching point, seven films ran online and at special sessions at universities, with excerpts receiving wide coverage on national television stations. The films showed women in roles traditionally enjoyed by men—such as being preferred over sons at birth, taking on leadership functions, leaving all the housework to men, and enjoying life drinking and socializing outside the home.

Film competitions encouraged young filmmakers to present touching, fresh ways to break gender stereotypes. Online, pieces like "I love you Mom" and "Isolation" surpassed 91,000 views by the end of 2016. More than 50 individuals and teams submitted their scripts, with the best nine funded to produce films shown at an award ceremony that attracted nearly half a million viewers on social networks.

At 13 of the nation's largest universities, a partnership with the Viet Nam Youth Union sponsored a series of festival days on the theme "joining hands to eliminate gender prejudice." Over 30,000 students took part. They viewed films produced by their peers. Talk shows with influential artists and experts galvanized debate. A contest sponsored university students to script and perform 50 mini-dramas about gender equality. Students themselves carried out other initiatives to

spread campaign messages, such as food festivals where male students prepared the food, photo exhibits on eliminating gender prejudices and a flashmob where people took a stand for ending gender stereotypes.

At the Viet Nam Military Medical Academy, Le Van Duc participated in one of the days and found it had made him aware of new ways of thinking. "I used to think that sons were more important than daughters. But now I understand that it does not matter. All children are equal in a modern society," he commented. "People should change the old-fashioned perception."

Nguyen Phi Hung, a student at the Viet Nam Academy of Traditional Medicine, which also hosted a festival day, said he now would find it "totally normal" to work for a women employer, and that women can do any job, even those traditionally done by men. "We students are very interested in this campaign," he said. "And we would like to deliver a message to everybody. Stereotypes can be abolished. People are willing to help others to do so."

MAINTAINING MOMENTUM

While the #HowAbnormal campaign ended in 2016, momentum carried over into 2017 as a photo exhibition inspired by the campaign has travelled to universities and centres of culture, and garnered a National Press Award for reporting on youth movements. Entitled "Women can do," it showcased striking photos shot by journalist Nguyen Thi Quynh Hoa that told a story of women as dynamic leaders and contributors to society.

An online pledge drive topped 17,000 signatories, including many university leaders and students, who committed to taking actions to break negative gender stereotypes and create a new normal.



The exhibit depicted Vietnamese women in four fields: the first airplane captain, the female footballer receiving the Golden Ball Award in 2014, the best female student from the main school for firefighters, and a female CEO of a multinational corporation.

Photos from the exhibit as well as campaign videos have become part of a new girls' education push by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Ministry of Education and Training, used to raise awareness among education officials, teachers, students, parents and others on gender equality. Other lasting headway may come through an online pledge drive, which topped 17,000 signatories, including many university leaders and students, who committed to taking actions to break negative gender stereotypes and create a new normal.

If all these people act together, the remaining barriers to gender equality could topple quickly. As Le Van Duc pointed out, applying a traditional saying in a call to the latest generation, "Many hands make light work."



Regional TECHNOLOGY TRANSFORMS PROTECTION AGAINST DISASTER

Every natural disaster brings graphic coverage of the toll these tragedies take. The lives lost, and homes and crops destroyed. The children who will never know their parents, or have a future derailed because they can no longer go to school. Relief and rebuilding efforts may require massive infusions of funds. Infrastructure and services can take years to fully restore.

All of these risks can be mitigated, but not without some degree of advance planning. While Asia and the Pacific is the most disaster-prone region in the world, it also has come up short on risk reduction. Immediate development priorities weigh heavily on many countries. Risk reduction takes specialized technical expertise, and can be time and resource-intensive—or at least so it used to be.

Across the region, UNDP is working with partners and advocating new technology with the power to revolutionize how people think about disaster risks and what they can do about them. Innovation makes this process not only more responsive to people at large, but also better, easier, and in some cases, cheaper.

SEEING WHAT HAS NOT BEEN SEEN

The journey began in 2015 with an exercise in foresight. UNDP called together nearly 200 experts from governments, the United Nations, civil society and academia for 10 days to see what others do not see. Using Futurescaper, an online foresight intelligence platform, and with the recently agreed Sendai Framework for Disaster Risk Reduction in mind, participants considered major challenges, why these are important and what happens when the challenges are overcome.

The exercise, covering a diverse region, identified over 500 challenges and priorities for action, with key areas including inadequate data, capacity gaps and institutional barriers. Participants agreed on a number of traditional means to move forward, such as greater awareness and advocacy, and better coordination. Some were quick to point to the new future opening through apps, drones and GIS-based technology. But

What's the big idea? SCALE UP DIASTER RISK REDUCTION

What's the difference?

PEOPLE ARE CLOSER TO SDGS:







only 20 percent could identify innovations that might apply to disaster risk reduction. It was a moment of revelation, and UNDP committed to championing potential innovations that could show some of the ways forward.

GETTING ALL THE INFO

One initial emphasis has been on data, among the most critical inputs for decisions and plans to reduce risks. While a lot of data are produced, they are not consistently useful or relevant for managing disaster risks. Inaccurate risk assessments and improper hazard and vulnerability analysis can lead quickly in one direction: uninformed policy decisions with potentially harmful effects on people's lives.

The foresight exercise pinpointed two sources of data to harness. One source entailed traditional databases like those maintained by governments, which could provide a strong foundation for risk reduction measures if the quality could be improved. UNDP helped bring together two partners, Tohoku University's International Research Institute of Disaster Science, a key think tank involved in the Sendai meeting, and Fujitsu, a leading Japanese tech company. They agreed to set up a Global Centre for Disaster Statistics in Sendai to host a global disaster loss and damage database and provide stakeholders a universal and open platform to increase capacity in analysis and collaboration through cloud computing.

Seven Asia and the Pacific countries with a strong interest in disaster risk reduction stepped forward as initial participants in the database, hoping to boost capacities to gather, store and analyse risk-related data, including those linked to Sendai Framework and SDG resilience indicators. The fact that the database is in the cloud is a major step—current practice too often involves people compiling numbers on a laptop, where data are vulnerable to loss and hard to share. The cloud means that people can crunch large quantities of data, in real time, across many development sectors, and even across countries to understand cross-border risks. As the initiative evolves, it will be open to countries around the world.

A global disaster loss and damage database could dramatically boost information sharing.

A second source of data is the new digital world of social media interactions and techniques such as crowdsourcing and perception surveys. Private sector companies already use these big data for marketing and advertising. They could also be applied to disaster risk reduction, including to understand perceptions and behaviours that can put people at risk—or protect them from it.

One initial obstacle has been language, however. Only a small percentage of people across the region interact in English, and the rest use a widely diverse mixture of tongues. Pulse Lab Jakarta joined UNDP to develop a web-based crowdsourcing



game for translation, piloting it first in Indonesia for six languages and more recently across 11 countries. Translator Gator asks people to play a game that builds taxonomies of disaster and humanitarian key words. Players translate English phrases into other languages and suggest synonyms; these can then be filtered and compared to other suggestions.

Sufficient data have been collected to begin processing them for an algorithm that can capture what people are saying online about disaster risks in 11 languages. For a large UNDP-supported tsunami programme in 18 countries, knowing what people are talking about will guide public awareness campaigns, the structure of evacuation drills, the use of celebrities and politicians as spokespeople, and so on. Further, it will be relatively easy to conduct rapid assessments of whether perceptions and behaviours have actually changed in response to measures like these. A future possibility is Chatbots, which can ask people for information, such as photos or messages about a disaster that can then be plotted on an open map platform as a kind of living situation report.

EYES FROM THE SKY

Innovation for disaster risk reduction is evolving through the use of other technologies as well, including under UNDP collaboration with DJI, China's leading drone company, on a regional drive to use drones for development. In 2017, drones took to the skies over the Maldives, one of the most geographically vulnerable countries in the world, since much of it sits only a metre or so above sea level.

Drones can snap aerial photographs for developing 3D and topographical maps, which in turn allow close tracking of shifts in sand dunes and coral reefs, flooding patterns, and manmade changes linked to economic development, among other information essential to defining disaster risk management options, and even forecasting and preparing for potential losses.

More traditional risk assessments have involved intensive use of GIS technology, with typically a bevy of international experts to manage it. After the 2004 tsunami, such an assessment of 11 islands cost over \$1 million. With drones, a lighter, faster process that would still fully inform effective risk reduction decisions on the 11 islands would not exceed \$300,000. Given that the Maldives has 160 islands, savings could be huge.

A 3D map based on a drone feed has already been developed—in the course of one day—for the village of Maibadhoo, which was severely affected by the tsunami. The map has helped identify safe areas in case of flooding, and pinpoint pockets of erosion that pose future threats. In late 2017, UNDP will train people from 20 islands to start using the drones for their own maps, as well as helping national authorities develop capacities for central data management.

Looking ahead, there is much more to explore. Virtual reality films, for example, one of which has already been shot on post-earthquake Nepal, can give viewers a visceral understanding of disaster impacts. They can build empathy and commitment among people from far-away donors to policymakers in capitals who may be relatively protected from crisis. The technology is already widely used in China, where there is interest in establishing a centre to produce films oriented around development aims.

One thing is clear. Innovations build on each other, ushering in new ways of thinking and unleashing creative disruption. For a region that needs to catch up on disaster risk reduction—and fast in the era of climate change—they offer a transformative journey to a safer future.

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