



PROTECT THE PLANET





MONGOLIA | Can drone data be used to enhance environmental protection?

UNDP is supporting the Government of Mongolia in using UAVs for real-time monitoring and remote sensing for environmental protection. At the subnational and local level, officers from protected areas, environmental managers, ecologists, wildlife researchers, and rangers have all been engaged to explore the use of drones in their work. The use of drones in biodiversity protection has led to improved monitoring of snow cover and forest distribution, and generates a faster and more precise census of wildlife.

Drone data missions supported the census of highly valued and protected Argali sheep, contributing to natural capital assessments by allowing collars to be put on Argali and Ibex species for monitoring and patrolling. Drones

provided real time information for controlling the forest fire in the boundary zones with Russia during the summer of 2016 when large scale fires across the border were at risk of spreading to Mongolia.

The Dornod Aimag Environment office conducted numerous flights for mapping green facilities in Aimag centres, taking videos of abandoned mining area and forest cleaning processes, and monitoring marmot habitat in particular soums. Next steps include systematizing the use of drones, and further improving analysis and use of the information and insights gained from drones and sensing technology, to support timely policy planning and decision-making.



MONTENEGRO | Can the carbon footprint of tourists be reduced by leveraging behavioural insights?

Tourism is a very important revenue source for Montenegro, yet it contributes significantly to the country's carbon footprint. Can we leverage insights from behavioural science to motivate tourists to offset their carbon footprints? Friends of Low Carbon Montenegro and UNDP partnered to find out. The initiative solicits donations from tourists to help fund one of three projects that will reduce carbon emissions: solar-powered boats, solar-powered phone charging stations in city centres, and recreational trails for hiking and biking.

Research shows that giving people agency over how their tax dollars are invested increases tax compliance. Tourists are being offered the above three choices of how they

would like to see their donations invested. Moreover, based on research showing that removing small barriers to taking an action can significantly increase that action, we streamlined the donation process by allowing people to make a cash donation at the same time they pay for their hotel stay. In addition, UNDP is designing an online calculator to help eco-minded visitors calculate their expected carbon footprint and donate according to the amount of carbon they expect to produce during their trip.



TEST

ECUADOR | How can crowdfunding be leveraged to protect the environment, improve livelihoods, and strengthen local cultural identities?

The April 2016 earthquakes in Ecuador killed 668 people and destroyed 13,962 homes. GreenCrowds, Ecuador's first social crowdfunding platform, aims to harness the power of crowds to support innovative, rural grass-roots projects that protect the environment and strengthen local cultural identities. It is supported by the Global Environment Facility Small Grants Programme, and implemented by UNDP. Through this platform, environmentally-minded entrepreneurs in Ecuador are given the opportunity to post projects in need of funding to the GreenCrowds website. This includes projects designed to address the damage caused by the 2016 earthquakes.

During its first campaign, GreenCrowds did not generate sufficient funding for community projects to succeed. With the UN advisors for behavioural insights, we designed communications to prospective donors to increase their motivation to contribute, while reducing perceived barriers, such as the time and effort required to donate. Email messages convey that donating is a socially normative action and can be accomplished through a simple, immediate, and one-time action. In addition, stories connect prospective donors with vivid, detailed stories of the people and projects in need of funding. Research shows that this is an effective way of humanizing the issues and mobilizing charitable donations.

UNDP and the United Nations Academic Impact initiative (UNAI) are partnering to establish and disseminate a toolkit encouraging university instructors to develop class

projects that help raise funds through the GreenCrowds platform. For example, university courses teaching the psychology of persuasion, behavioural economics, or fundraising for non-profits will be given an opportunity to contribute ideas to UNDP on how to persuasively solicit donations on the website. University courses teaching behavioural research methods can complete projects that test the effects of different messaging on donation rates. The toolkit provides examples and materials that make it easy for course instructors to integrate this into their curriculum.



TEST

INDONESIA | Can sensors be used to design smart public transportation systems?

The city of Makassar is keen on introducing a smart public transportation system. However, it faces several challenges, including the integration of existing semi-formal modes of transport such as Pete-Petes (minivans). At city leaders' request, UNDP, through its regional City-I-LEAPS initiative, is supporting Makassar to use social innovation to collaboratively design solutions that will make the public transport system more user-friendly.

To design experiments with the highest probability of success, UNDP and the Pulse Lab Jakarta brought together an unusual group of doers: representatives from the city transportation agency (DISHUB), Pete-Pete association (ORGANDA), students, local designers and activists. The solutions developed during the three-day design workshop were further refined and improved during a six-week incubation process led by BaKTI, a local NGO.



Pasikola-eNassami emerged as the most promising solution. It focuses on repurposing existing minivans to provide reliable transportation for school children. It will also include a mobile phone application so drivers, parents and schools can communicate on estimated times of arrival and departure. The solution is now ready to be prototyped and tested. The first of the repurposed vehicles will be ready in the spring of 2017, and will be tested in one school. An iterative process of testing, learning, and readapting the solution will be adopted. Depending on the success of the initiative, by the end of the pilot stage 30 vehicles will be repurposed and 10 schools will be targeted.



CHINA | Can the growing problem of electronic waste be tackled by introducing easy to use recycling systems?

China is one of the largest producers and recipients of e-waste in the world. According to a 2016 recycling industry report released by the Ministry of Commerce, 152.74 million e-waste items were recycled in China in 2015.

In 2014, UNDP partnered with Baidu and the Ministry of Environmental Protection to launch Baidu Recycle, an app that facilitates e-waste recycling. Within a year, the app (Version 1.0) led to the safe recycling of over 11,429 items, including TVs, computers, and fridges. The service has since been scaled up beyond the original pilot cities of Beijing and Tianjin to 22 cities.

This initiative has gained global recognition. It has been selected as a semi-finalist in the MIT Climate Co-Lab Contests. The UAE Government selected it to for its 4th World Future of Government Summit. It was one of the winners from more than 800 entries at the 2015 Solutions Summit. In 2016, with the launch of Version 2.0

of the app, the team built an internet-based nationwide e-waste management ecosystem, and launched the Baidu Recycle Green Service Alliance, comprising Intel, ROBAM Appliances, Midea, Joyoung, Changhong, Haier, Lenovo, TCL-Aobo, and the China Resource Recycling Association. Currently, the team is working on a built-in online payment system, B2B e-waste services, and other improvements. Developers are working on Version 3.0 through iterative design and rapid prototyping. It is expected to enter the market in June 2017.

Baidu is now going global as UNDP shares knowledge and tests the app's replicability for other countries. UNDP developed the app in English to share knowledge and expertise with the rest of the world. To encourage the adaptation of the innovation in other countries, UNDP invited government representatives from 13 countries to learn on-site about China's e-waste management systems, practices, disposal and treatment technologies.



ZIMBABWE | Can the use of remote sensing by Governments enhance the design of National Action Plans for Biodiversity?

UNDP supports more than 140 countries in the development of national biodiversity plans, as part of our support to countries to implement the 2020 Strategic Plan for Biodiversity and the SDGs. We realized that a large number of partners do not have access to spatial data critical for biodiversity planning. The average number of maps across more than 100 National Action Plans was fewer than four. In fact, most maps did not contain information that can lead to better planning decisions. In many cases, critical datasets, such as the location of protected areas, areas critical for biodiversity, and areas important for essential ecosystem services, were missing altogether.

The Government of Zimbabwe requested UNDP's help in preparing maps and spatial data to better inform and develop their national biodiversity plan. Together with the Pulse Lab Kampala, we created a single spatial data portal for Zimbabwe that doesn't require GIS or specialized knowledge. With the government's support, we pulled together key datasets for the country using existing data, and reviewed the results at a national workshop with 40 policymakers. As a result of the mapping and the newly gained insights on the rapid losses of wetlands around

Harare, the government included strong actions for establishing an integrated water protection zone around the city as part of an overall water security plan.

Moving forward, we are working with more than a dozen partners, including the UN Global Pulse, NASA, National Geographic, Conservation International, The Nature Conservancy, University of Montana, Wildlife Conservation Society, University of Maryland, and the World Conservation Monitoring Centre, to scale and adapt the tool for all government partners.

We are working on enhancing key features, including high-resolution forest cover data and data on the human footprint. The goal: Ensure that decision-makers have a minimum set of data that allows countries to understand patterns of change in the landscape and seascape in a user-friendly format. As we look ahead, we plan to support the development of additional tools to help countries understand the implications of these patterns on their ability to achieve those SDGs such as food security, sustainable livelihoods and water security, that depend on healthy ecosystems.

