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Resilient nations.*



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STORIES

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Dear Readers,



Welcome to this special issue of Development Stories. The main focus of this edition is on the ongoing efforts of UNDP and our partners to promote social innovations for sustainable development.

It's been a year and a half now since we helped launch the country's first Social Innovation Hub with the mission of making the most of the latest technology to tackle social challenges and advance human development.

In this short time we have managed to test and prototype more than ten exciting new ideas—some of which have turned out to be major game-changers.

One of these ideas featured in this issue is a new app and website to help young job-seekers. The Prv.mk app brings all the latest employment opportunities directly to smartphones, while the associated website has already recorded almost 2 million visitors.

Another innovation covered here is the region's first-ever public safety mobile app. Aimed at helping citizens stay safe, the app provides access to detailed information about a range of dangerous events—from earthquakes and floods to potential hazards such as violent thunderstorms and heavy snowfalls.

Technological innovation also features in these pages with a report on how an innovative platform called My Municipality has taken social inclusion to a new level by enabling over 6,500 citizens to have a say in decision-making on the issues that affect their lives.

I very much hope you will enjoy catching up on our latest news—and please get in touch with UNDP if you would like to join us in our quest for social innovations.

Have a great Spring!

Louisa Vinton

A handwritten signature in blue ink, appearing to be 'L. Vinton', written in a cursive style.


UNDP Resident Representative



FINDING WORK JUST GOT
A WHOLE LOT EASIER WITH
A NEW APP THAT BRINGS
**ALL THE LATEST JOB
OPENINGS DIRECTLY TO
YOUR CELLPHONE**

It's official!

The country's first one-stop app for job-seekers—Prv. mk—was launched in 2014 together with a brand new website, and within a year it already had almost 2 million visitors and over 10,000 active users.



The app can be downloaded free at Google Play. And while you're downloading the app, check out the new accompanying site at www.prv.mk.

With Prv.mk, young people can find out about all the latest job openings across the country, including internships, volunteer positions and entry-level job placements.

The app was developed by UNDP, the Ministry of Labour and Social Policy, the National Employment Agency and the Faculty of Computer Science and Engineering at the Social Innovation Hub, as an innovative solution in the country's efforts to tackle unemployment.


Young people were involved in every step of the app's development—even coming up with the name—to make sure that the app fully matches their job-hunting needs.

Even with a staggering youth unemployment rate of over 50 percent, 90 percent of young people in the country have access to the Internet, and over half own smartphones.

So what better way to tackle the issue of youth unemployment than with an app that can be accessed anytime, anywhere?



THE PRV.MK APP BRINGS EMPLOYERS CLOSER TO POTENTIAL EMPLOYEES BY PROVIDING A ONE-STOP SITE FOR JOB VACANCIES, INTERNSHIP OFFERS, ENTRY-LEVEL JOB PLACEMENTS, VOLUNTEER POSITIONS AND MORE.



A SMART SOLUTION: REAPING THE FRUITS OF TECHNOLOGY

HOW CAN SMS AND
FACEBOOK HELP FARMERS
IN PRESPA?

“This is the one everyone knows from cartoons – the little worm in the apple,” says Eftim Petkovski, scooping the larva of a codling moth from an apple in his orchard in Resen.

“But it’s no joke, I can tell you – if we farmers don’t spray for them early on, all our livelihoods are at risk.”

“Timing is everything with these pests. You’ve got to predict their migrations – and that can be a matter of hours. Spraying too early or too late is much less effective and a lot more expensive because you need bigger amounts – often as much as three times the quantity. And you can guess what that does to the environment.”

Overuse of pesticides amongst orchard farmers in Resen has been proven to be a major cause of pollution in the beautiful but environmentally vulnerable region of the Prespa Lake Basin, threatening the habitat of over 2,000 species of birds, fish and mammals, including many endangered animals unique to Prespa.

UNDP has been working in close cooperation with the Municipality of Resen in recent years (with funding from the Global Environment Facility and the Swiss Agency for Development and Cooperation) on projects to:

- Raise awareness of the dangers of pesticides
- Help local farmers adopt more environmentally sustainable agricultural practices

These efforts have already led to a 30 percent reduction in the amount of pesticides used by local farmers each season - good news for the environment, and savings for farmers.

“The way we dealt with pests before was wasteful,” says Mr. Petkovski. “And a lot of that could be put down to farmers’ lack of awareness.”

“But that’s not the whole story – the problem of knowing the best time to spray is a problem faced by all farmers. It’s about the speed of notification and that’s in many ways a technical problem needing a technical solution.”

In response, the Municipality of Resen and UNDP set up a system to monitor pests and diseases in 2005, installing six solar-powered agro-meteorological monitoring stations and a number of insect pheromone traps.

The monitoring stations gathered all the necessary data, but the problem remained: how to get that data directly to farmers as quickly as possible.

There’s no local media in Resen, so for the past ten years all they had to rely on were paper flyers posted in the square – not an adequate system for updating farmers.

“To make the system sustainable, we knew we needed to find an inexpensive solution,” said UNDP’s Dimitrija Sekovski. “And that’s what we came up with – an innovative way of notifying farmers that cost less than \$1,000 to develop.”

SMS and Facebook help get data to farmers.

Walking between the apple-trees in his orchard, Mr. Petkovski pulls up the messages on his mobile phone.

“Here’s the SMS we received about the codling moth on Friday,” he says.

Apple trees in the area of the village of Rajca have been infected by the codling moth. The apple trees should be treated in the next 10 days. For more info, visit the Facebook page or call the Association of Farmers.



The latest survey shows that 82% of Prespa farmers actively use this SMS and Facebook system to ensure sustainable agricultural practices.

“That message went out to every farmer in the village of Rajca whose name is registered with the local Association of Farmers,” says Mr. Petkovski.

“And that’s how we were able to spray before the moths had a chance to spread. Just knowing that in time has saved a lot of our fruit.”

The SMS system was developed by the Faculty of Computer Science at the University of Cyril & Methodius in Skopje, with UNDP support.

The same pest control expert who sends SMS updates to farmers also updates a Farmers’ Association page on Facebook, to help get the word out even further.

Low costs and simplicity of implementation make this system highly suitable for replication in other municipalities across the country.

The new notification system is part of a six year project to restore and protect Prepa Lake, funded by the Swiss Agency for Development and Cooperation.

MY Municipality

– A new initiative for greater public inclusion in local policy-making



Over 6,500 citizens have already seized a new opportunity to communicate their top priorities for local development to decision-makers through an innovative data-gathering system called My Municipality.

Through the installation of highly user-friendly touchscreens and an interactive website (www.mojapoptina.mk) the My Municipality project has enabled citizens in the four pilot municipalities of Tetovo, Kumanovo, Prilep and Suto Orizari to identify—with just a few clicks—the three local development issues and policies most important to them and their families.

The tool has helped the municipalities and UNDP to gather valuable and accurate data about people's needs and priorities, including the changing trends in the needs of the different groups in the population.

All this data provides an excellent basis for policy-makers to make better informed decisions at local level, and in this way local government actions and development projects will truly reflect the needs of local people.

In December 2014, only six months after the project started, UNDP began funding and helping to implement small-scale projects based on the priorities identified in the pilot municipalities.

In Kumanovo, citizens have prioritized the need to improve opportunities for entrepreneurship and business. A new project has enabled twenty Roma men and women to complete a training programme aimed at building their personal and professional skills. With these new skills, they can now take advantage of the entrepreneurial opportunities offered by the Self Employment Programme and other Active Labour Market Measures. Organized by UNDP together with the Ministry of Labour and Social Policy and implemented by a local civil society organization in partnership with the Employment Centre, the project has already mapped all private sector companies interested in employing Roma and other disadvantaged groups in 2015.

In Prilep, citizens have prioritized the need to increase internship opportunities for unemployed youth. A local civil society organization, working in partnership with the Municipality of Prilep, has already succeeded in gathering more than 250 representatives from universities, technical high schools and private companies to participate in events aimed at raising awareness about internship opportunities and the benefits of such opportunities for students and young unemployed people, as well as for educational institutions and local businesses. As a result, six young people have been enrolled in a three-month internship programme.

In Tetovo, citizens have prioritized the need to improve education for pupils from socially disadvantaged families. A local civil society organization in partnership with the multi-ethnic Lirija Primary School has developed a special programme for supporting educational activities for children in grades 5-9 who come from socially disadvantaged families. The programme has engaged three tutors to help these

“The My Municipality solution is deceptively simple. What amounts to just a few touches of the screen for individual citizens provides invaluable data to inform and guide policy-makers in the decisions and actions they take for the whole municipality. All the results of the citizens’ choices are visible online and accessible to all. Transparency and citizen inclusion are crucial to the progress of any municipality. We believe that My Municipality will contribute greatly to bottom-up policy-making.”

Teuta Arifi, Mayor of Tetovo

pupils improve their knowledge in mathematics and languages (Macedonian, Albanian and English).

In Suto Orizari, citizens have prioritized the need to improve channels for sharing information about employment opportunities. New channels for sharing information were swiftly set up, including informative meetings with representatives of the Employment Service Agency, citizens’ gatherings with the support of local Roma civil society organizations and better access to employment coaches and mentors in the municipality’s Roma Info Center.

Introduced in May 2014, the My Municipality system was designed and implemented by UNDP in partnership with the four pilot municipalities and the Ministry of Labour and Social Policy. The project is part of a regional project on Roma inclusion funded by the The Swiss Agency for Development and Cooperation.

FIRST CLIMATE CHALLENGE LAUNCHED: IT'S YOUR CITY. IT DEPENDS ON YOU!

#ОдТебеЗависи



In December 2014, UNDP launched the first climate challenge ever attempted in the country, inviting citizens to step up and play a role in addressing the issue, by submitting proposals for innovative projects aimed at solving three fundamental climate-related challenges:

- 1 What can we do to reduce the level of carbon emissions in cities?
- 2 How can we better adapt to the climate challenges we face?
- 3 How can we make better use of smart technologies to increase our resilience?

We've partnered with the Ministry of Environment and Physical Planning, the Embassy of Sweden, USAID, MilieuKontakt and national celebrities.

In only 2 months, we received OVER 130 SMART AND INNOVATIVE PROPOSALS.

Here we present the ten shortlisted ideas that will participate in a Climate Change Innovation Camp to be held on 17-19 April 2015. During the Camp, innovators will work together with mentors to build project models and prototypes.

1. SHOES AND BIKES THAT GENERATE ELECTRICITY FOR CHARGING DEVICES

The idea is to harness the energy potential of items in daily use to provide a second function for already existing products, such as shoes and bikes.

2. ECO-TAXI

The idea is to create Eco-Taxis by converting existing vehicles into environmentally-friendly electric vehicles with low consumption, no exhaust or greenhouse gases and no noise.





3. AIR SOLAR COLLECTOR WITH ROTATING CELLS

The idea is to create a new type of air solar collectors, making them cheap and light with effective thermal features. Installed on south-facing facades, they will act as solar collectors during the day and as billboards at night.

4. SOLAR COOLING

The idea is to construct a prototype solar cooling device that uses national capacities and resources readily available to any household, office or facility, as well as enterprises or industrial-processing facilities.

5. CONTAINER FOR RE-USING WATER IN BATHROOMS

A container easily inserted in the bathrooms of houses, offices and hotels, that gathers the water that we use for personal hygiene from the sink and the bathtub. The water goes through filters into the container and is then used to fill the flush toilet, meaning the same water gets used twice.

6. E-SWITCH

This idea addresses the problem that people often forget to turn off the light in rooms they have recently entered and left. E-switch is an easily-installable intelligent system for mobile phones that can provide user-positioning depending on the wireless signals in the environment.

7. CARPOOLING SMART APP

Based on free maps of the city and other applications such as Viber, Skype or WhatsApp, users can find the routes of people offering transport that suit their needs, join the ride and reduce their monthly transport costs, especially for regular commutes.

8. VIRAL VIDEOS

The idea is to create viral videos and humorous sketches (including sketches starring celebrities) for placing online. The theme will be the promotion of alternative means of transport such as bicycles. The aim is for more people to embrace alternative means of transport and thus significantly reduce pollution.

9. CLIMATE CAFÉ

Climate Café is a simple but effective idea for creating a place where people/neighbours will gather to hear and share their experience with the public about their activities that contribute to climate change mitigation.

10. GREEN FACADES AND GREEN ROOFS

Many walls of buildings, usually north-facing walls, are completely empty. With this idea, they can become green walls coated with moss, ivy and aquaponics. Green roofs can be built on any roofs or other public areas such as bus-stops, markets and hospitals.

Follow: [#OdTebeZavisi](#) for regular updates.



Early warning for disasters only a swipe away

A UNDP-supported mobile application helped reduce the risk of suffering and damage during recent flooding.

“After three days of heavy rain, hundreds of homes were flooded around here. We were cut off for two days and without drinking water, but at least we were able to keep informed about what was happening through our smart phones and this new app,” says Vase Krstev of the village of Murtino in Strumica municipality.

In early 2013, Murtino was one of several villages in the southeast of the country to be hit by floods, with more than 80 percent of the land under water and damage to over 400 homes.

The country is exposed to various types of natural hazards, and floods are increasing in frequency, intensity and losses. With the new app, developed by UNDP and supported by the Crisis Management Centre, for the first time emergency services were able to use smart phones and tablets to keep people informed with up-to-date and on-demand information that is easy to navigate during a disaster.

Have you downloaded our Disaster App yet?

The mobile app was tested for the first time during floods in February 2013 which damaged

OVER 400 HOMES

The programme was developed by local university students with support from UNDP's Innovation Fund in the amount of

US \$10,000

The fact that

BILLIONS OF PEOPLE

use mobile phones increases the potential for applications that can provide vital information and help during disasters



Scan here for Android



Scan here for iOS

Designed to give users updates and provide rapid early warnings when needed, the app can reduce the potential impact of a disaster - especially when information is needed in a hurry. Because the app gives users access to such a large amount of data, information can be customized and specific, giving it an advantage over traditional emergency broadcasting services such as radio. For example, users can access a map to find out the location and status of the disaster and whether their area is likely to flood or remain safe.

Developed jointly with students and staff at the Faculty of Computer Science and Engineering of Skopje University, and drawing on data from the National Crisis Management Centre, the app is designed to be a user-friendly way to quickly and efficiently share disaster awareness and information on prevention and preparedness. UNDP helped pay for the development of the app through its regional Innovation Fund and provided support for its design and release.

"It's a great app," says Mr. Ljupco Jankov, Secretary of the Red Cross in Strumica. "During the February floods, with a lot of infrastructure damaged or inaccessible, the app helped updates and alerts to be sent out that kept people out of harm's way and advised them on how to protect themselves."

"It's also really easy to use," adds Vasko Popovski, UNDP's Project Manager for Disaster and Climate Risks and designer of the app. "You can find details on any hazardous event in the country, whether it's a landslide, a flood, a storm, or anything else that could be considered dangerous. Before now, people mostly

got information about dangers and hazardous events through newspapers and the television, but these aren't the most relevant and immediate channels anymore."

Having successfully tested the app during the floods, the Crisis Management Center and many of those who faced the rising waters are now confident in its potential to provide critical information during any large-scale disaster.

"This marks the critical next step in early warning," notes Jordan Ryan, Director of UNDP's Bureau for Crisis Prevention and Recovery in New York. "We are now witnessing constant improvements in the ability to track tsunamis and weather patterns, but getting the word out in a timely manner remains the most difficult challenge of early warning. We need to reach as many people across a wide territory as quickly as possible. Apps like this make it much easier to get the job done. UNDP is excited to play a part in fostering innovation in the use of mobile technology with results that reduce disaster risk."

UNDP has been supporting the use of innovative technologies to reduce disaster risk, such as mobile phones and apps, in a number of countries throughout the world.

USING COLLECTIVE INTELLIGENCE AND STRATEGIC INSIGHT FOR DEVELOPMENT

The United Nations family adapted an innovative foresight methodology called 'Futurescaper' to ask over 1,000 citizens to prioritize the issues that would make the most difference to them and their families. And then, we integrated all of these answers into our United Nations Strategy for 2016-2020 to make sure that all voices are heard.



Futurescaper is a crowdsourcing platform, based on research at MIT and the University of Oxford, which uses the internet to engage large groups of stakeholders in exploring their views of the future. These views build on each other to create rich, interwoven webs of influence and opinion that form the basis for more robust and rapid foresight exercises.



Here you can see a graphical representation of the key priorities identified by the citizens: improved education, better job prospects for youth, and reversing emigration.

Let's work together to make this happen!



THE ROMA INFORMATION CENTER OF THE FUTURE

Numerous studies have shown that Roma continue to suffer severe disadvantages in access to education, healthcare, public services, and decent living standards.

Many projects have attempted to tackle these disadvantages in recent years. Only a few of these projects, however, have had any meaningful impact on the lives of Roma.

The establishment of 12 Roma Information Centres in 2007 was a major step forward.

These centres were intended to serve as one-stop shops to provide Roma with useful information and access to social protection services, employment, health, housing, education and legal documentation.

To date, however, the information centres have failed to meet expectations.

Bogged down in administrative paperwork, the staff of the Centres lack the skills and technology needed to adequately share information with the communities they are meant to serve.

In trying to help address this problem, UNDP set out to answer the question:

How can we make this essential service more effective and sustainable on the ground?

In response, we conducted three experiments that we hope will make a difference:

1) Remote Roma Centre

CHALLENGE: To test whether a 'model of remote provision' could improve services for the most vulnerable. What if citizens received support *when* and *where* they needed it instead of having to travel to a particular location for such support?

THE EXPERIMENT: We equipped one pilot centre with new IT tools, enabling it to provide services both in the office and the field. Roma outreach workers were equipped with smartphones and tablets as well as online access to different forms that can be filled in on the spot. One staff member was tasked with going directly to people in the community for advice and referrals, while another provided the same services in the office.

2) Roma Centre of the Future

CHALLENGE: What if we could create a service delivery centre from scratch?

THE EXPERIMENT: Young Roma and non-Roma graduates in IT, Economics and Social Sciences worked directly with the Centre's clients to design a Roma Centre of the Future. The students developed a system for gathering and applying peoples' feedback on the prototypes. They also promoted university internships for use in addressing other social problems.

3) Roma Youth — Agents of Change

CHALLENGE: What if no Roma Centre existed? How would people find the information they need?

THE EXPERIMENT: Using an online platform that collects all support opportunities for Roma, we turned to Roma high school students to share information in their communities.

Roma high-school students equipped with tablets and smartphones were trained in sharing information with family members and the broader community. Over a three-month period we helped build skills and self-confidence amongst young volunteers from vulnerable communities in Skopje, Kumanovo and Prilep.

Which experiment worked best?

The Roma Center of the Future!

More updates coming soon.



Catering to fresh talent

– two new apps to promote
the services of high-school chefs

First take a bunch of talented young chefs eager to cook up a storm. Then mix their ideas together with the latest technological innovations. Next add a generous helping of funds and support from development and civil society organizations. Combine these ingredients with some business know-how from the private sector and—voilà!—you have a recipe for a successful social partnership that promotes entrepreneurship.

The students of Lazar Tanev High School are already tasting the rewards of such success with the launch of two new websites and mobile phone apps designed to showcase their cooking skills through delicious recipes and the offer of quality catering services ordered online.

Clicking on www.coolinari.mk takes visitors directly to a list of mouthwatering and easy-to-follow recipes—from traditional dishes to exotic fare—that make optimum use of the excellent fresh ingredients available throughout the country. And the page design also neatly incorporates photographs and mini-biographies of the budding chefs currently training at the Lazar Tanev School.



For hosts and event-organizers looking for meals on a bigger scale a visit to the school's www.mojketering.mk site offers a quick and speedy solution to all catering needs. The site's extensive and user-friendly menus reduce the burden of feeding large numbers of guests to a matter of a few clicks.

"With the [mojketering](http://www.mojketering.mk) site and mobile app we're especially hoping to encourage businesses and international organizations to use the school's catering services," explains Lazar Tanev's Director, Zoran Nikolovski. "In that way they'll not only be getting a good service but also helping the school and the students to develop and grow. All the income from catering will be invested in the school to create training opportunities for the students. In the long run we're hoping this will boost our students' chances of internships and training abroad and make them much more competitive on the labour market."

The new websites and apps are the result of a wider project aimed at applying social and technological

innovations to generate opportunities for young entrepreneurs through social partnerships between civil society organizations working with youth, local self-government and the private sector. The innovative solution worked out for the Lazar Tanev Catering School is the outcome of joint efforts on the part of the school itself, working together with the Association for Social Innovations (ARNO) and the 'Youth Can' citizens' association with financial support from UNDP.

"We were inspired by what Jamie Oliver has done for catering in the UK, the abundance of great fresh and healthy ingredients in this country, and the fantastic abilities of the young students to cook," says Irina Janevska, the founder of ARNO, "The country has great potential—we just need innovation and determination. With this project our ultimate aim is to create better social services using modern technologies that will allow the high school to be sustainable."

UNDP supported the development of the website and apps as part of the Youth Social Entrepreneurship Programme aimed at developing creative initiatives that promote youth entrepreneurship and support social partnerships. This Programme directly supports and sustains youth engagement and creates meaningful roles and possibilities for greater participation for young people.

"All the income from catering will be invested in the school to create training opportunities for the students. In the long run we're hoping this will boost students' chances of internships and training abroad and make them much more competitive on the labour market."

The logo for Cooljnari.mk features a stylized white outline of a chef's hat with a fork and a knife integrated into its design. To the right of the icon, the text "Cooljnari.mk" is written in a white, sans-serif font. The background of the entire page is a photograph of a kitchen where several people, including students in chef uniforms and a woman in a floral top, are gathered around a table with various food items. The logo is overlaid on the top right portion of this photograph.

Cooljnari.mk

©UNDP

NEW APP GUIDES SKOPJE COMMUTERS TO GREENER TRAVEL ROUTES



“This project shows that scalable, data-driven climate solutions can be adopted anywhere in the world, and that leaders from all sectors can work together to build a safer, healthier and greener future.”

UNDP Resident Representative
Louisa Vinton

Using “big data” for climate action

Close cooperation between the United Nations Development Programme (UNDP), the Ministry of Environment and Physical Planning, the City of Skopje and the Faculty of Information and Computer Technology (FINKI) has resulted in the launch of an innovative new app—the Skopje Green Routes planner.

The app provides travellers in Skopje with all the information they need to plan the quickest, cheapest and most environment-friendly routes to destinations in the capital. Carbon emissions data help commuters to make the “greenest” choice.

“This is a major step forward for the country, and a great marriage of modern technology and the transport system,” said FINKI Dean Dimitar Trajanov. “Cost-effective and highly interactive, the app fills a vital need for the public to be better informed when choosing how to travel. Moreover, the app can easily be scaled up in the future for other cities and towns throughout the country.”

The app makes use of Google Transit, a feature of Google Maps that helps users plan their trips on public transport by calculating routes and transit times, and by providing directions to the nearest bus-stops.

The Skopje Green Routes planner not only provides users with information about bus routes and timetables, bicycle rental-points and parking places; it also gives real-time information on traffic congestion and air pollution.

The data on traffic flows, congestion and air pollution (CO₂ emissions) is taken from sensors installed by the city’s local authorities at the main road junctions and the most congested traffic routes in the city.

The Mayor of Skopje, Koce Trajanovski, warmly welcomed the app: "With this app the City of Skopje has become the first city in the Western Balkans to incorporate its public transport schedules into Google Transit's web service—an app that will provide citizens and tourists with an easy way to find routes and times across the city." He added that the city authorities in Skopje are continuously working on improving the transport infrastructure, renovating key roads and streets and building more cycling trails.

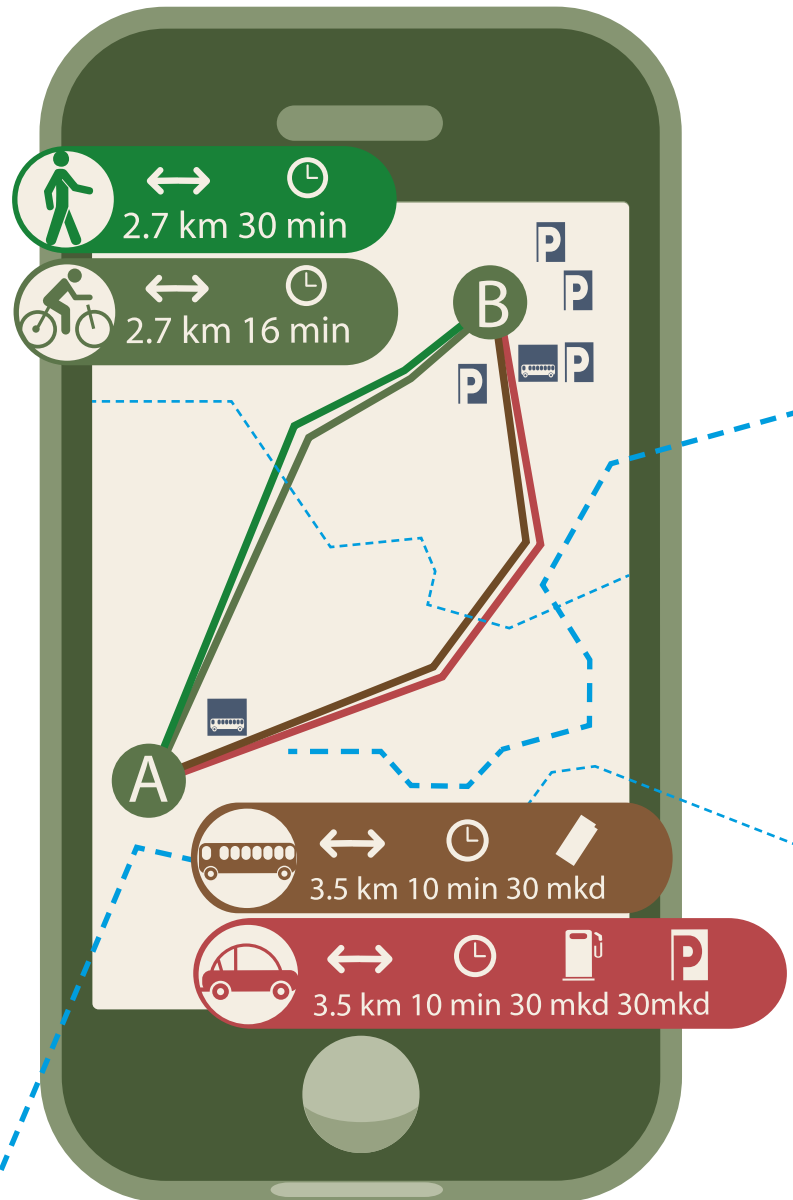
The Minister of Environment and Physical Planning Nurhan Izairi, stated that "by choosing a 'smarter' way to travel, everyone can contribute to a cleaner environment, better health and budget savings. This tool allows us to fulfil our daily commitments, while also being more responsible towards the environment and towards ourselves."

UNDP Resident Representative Louisa Vinton praised the app's innovative use of big data. "This project shows that scalable, data-driven climate solutions can be adopted anywhere in the world, and that leaders from all sectors can work together to build a safer, healthier and greener future."

The Skopje Green Routes project was honoured as one of the top seven "projects to watch" in a global contest organized by the UN Global Pulse to harness big data to fight climate change.

The new app was presented to representatives from governments and the public and private sectors at the UN Climate Summit hosted by Secretary-General Ban Ki-moon in New York on September 23, 2014.

The app is available for free download at Google Play Store.





GETTING AHEAD OF THE GAME: FORESIGHT TO ADDRESS COMPLEX WATER-RELATED CHALLENGES

**THE STRUMICA RIVER BASIN IS ONE OF
THE COUNTRY'S MOST VULNERABLE
REGIONS TO CLIMATE CHANGE.**

By 2020, water demands in the Strumica River Basin are expected to increase by 40 percent, while extreme weather events – such as floods and droughts – are also expected to become more frequent.

To avoid the common trap of planning for the last crisis rather than the next one, UNDP has experimented with some foresight tools and methods.

A foresight approach enhances existing planning strategies and tactics by increasing the scope and scale of analysis.

In bringing more voices and perspectives to bear on the planning process, foresight can work to illuminate the networks of relations underlying complex problems.

PICK A CARD

To generate new perceptions, data, and future scenarios for the Stumica River Basin, we used a methodology called foresight eXplorer.

Featuring a localized deck of cards - in both English and Macedonian - the foresight eXplorer uses collaborative, face-to-face gaming dynamics to generate novel discussions and new learning opportunities.

In less than two months, 12 workshops were held, drawing 300 people from the region's six municipalities.

Participants were eager to share insights and perspectives on the critical aspects of sustainable water management – and possibilities for what might lie ahead.

While the EU's Water Framework Directive and programme of measures were used to build content for the game, the idea of the foresight eXplorer is to widen the scope of analysis, so gamers were given the opportunity to generate content at any time.

The process identified the prevention of flooding as the top overall priority for local stakeholders—a finding that matches the conclusions of ongoing expert analyses.

It also provided an excellent basis for designing and implementing a comprehensive basin-scale flood risk management programme by supporting investments in ecological restoration projects and in the sectors most affected by water-related issues, including agriculture and forestry.

In addition to charting the challenges facing the region, participants were also asked to consider opportunities and wild cards—events that seem unlikely but will have a big impact. Some of the wild card events suggested by participants at the workshops include: bioterrorism, degradation of the Turia Dam, and problems surrounding the Ilovica Mine, which has not yet been constructed.

Using the foresight eXplorer helped the project team to explore radical possibilities for what might lie ahead. Furthermore, it enlivened public engagement in monitoring and management of critical water issues and inspired new and deeper conversations amongst those affected most by climate change.

FLOOD PREVENTION EMERGES AS HIGHEST PRIORITY AMONG LOCAL RESIDENTS IN THE STRUMICA RIVER BASIN



© UNDP / Lubomir Stefanov

A GAME-CHANGING APPROACH TO PROMOTING SUSTAINABLE FARMING IN PRESPA

Unsustainable agricultural practices among the apple farmers of Prespa Lake have been proven to be a major cause of pollution in the ecologically vulnerable region.

One of UNDP's key aims has therefore been to help farmers change these harmful agricultural practices and adopt more sustainable farming methods.

Bringing about such a shift from traditional methods of farming is a major challenge. This is a region where many livelihoods depend on agriculture and **unsustainable methods of farming have become long-standing habits.**

To overcome this challenge, **it is crucial to raise awareness** among the farming community of the **damage caused by unsustainable farming** and the many risks involved if they do not adopt more environmentally responsible practices.

Raising awareness is more easily said than done, especially when it comes to educating people on fairly complex environmental issues.

UNDP has already launched a range of important initiatives to educate local farmers, including a model orchard demonstrating and teaching more sustainable practices. **But the project's boldest and most exciting initiative is just being developed.**

We're applying state-of-the-art technology to the task – developing an online game that helps Prespa apple farmers acquire new knowledge and skills to improve production while protecting the environment.

The game features farming practices that mimic real-world apple production, and is continually fed with real-time data from sensors installed in Prespa:

- Gameplay will allow users to choose terrain and soil similar to what is found locally and to choose the types of apples to grow based on virtual in-game orders.

- The game will **increase farmers' knowledge of the insects and pests that threaten apple production.** Moreover, the game will feature insects and parasites that pop up randomly, informing players about when, how and in what quantities to spray pesticides, apply fertilizers, and irrigate the land.
- The game will be a **fun and effective way of encouraging farmers to work together** to increase the chances of better yields, manage land and money, and of course, compete for the title of 'Best Digger of the Year'.

The game has been developed with our friends from the Faculty of Computer Science and Engineering at the University of Sts. Cyril and Methodius in Skopje.

We are hoping to attract strong participation from apple farmers in Prespa and the wider region. We envision **an open space**, not only for gaming, but also for networking and idea-sharing for farmers from all over.

So, come and **play with us!**



OPENING THE WINDOW ON MUNICIPAL SERVICES IN GEVGELIJA

“Before now, most people outside the administration found it quite difficult to access and understand a lot of information about the key functions of the municipality,” says Risto Atanasovski of the local NGO Foundation for Local and IT Development in Gevgelija. “This was especially the case with the environmental protection and communal services provided by the municipality—things like waste management and water supply. But now with this new IT tool, Dashboard, all this information is available at a glance in a highly user-friendly and interactive format. This is a major step towards greater transparency and citizen participation in local government.”

Dashboard is the latest innovative tool designed to open the window on municipal functions and facilitate greater public participation in local decision-making on environmental protection services.

Launched in April 2014, this new interactive online web tool developed with UNDP’s support is now successfully operating in the Municipality of Gevgelija and looks set for expansion to other local government functions and services.

The Dashboard website presents users with a clear, concise and intuitive display of key data on the municipality’s efforts and achievements in environmental protection services.

The ingenious design of the site enables any non-expert to swiftly gain an overview of the municipality’s functions, providing a carefully selected set of indicators on inputs, outputs and outcomes with which to measure the effectiveness of local government actions and investments.

The idea for the new interactive online web tool originated from the local NGO Foundation for Local and IT Development. The NGO came up with the innovative idea to address the gaps in public access to information detected by a UNDP-supported report on environmental governance in the municipality of Gevgelija. The Foundation’s proposal received the strong backing of the Municipality of Gevgelija and financial support for its development from the UNDP programme UNDP programme “Think Globally – Develop Locally”.

“The development of this platform means we can present the citizens with a clear picture of the competences and activities of the municipal administration in the area of environmental protection and communal affairs,” says the Mayor of the Municipality of Gevgelija, Ivan Frangov. “And the public can now easily contact and give feedback to the relevant department through the site. In this way they will be directly involved in the creation of municipal policy, since we will use this feedback to help improve the quality of our services. All in all, Dashboard is a great breakthrough in the transparency and accountability of local administration. I hope and believe that we will extend the application of this tool to other key local services.”



“THE PUBLIC CAN NOW EASILY CONTACT AND GIVE FEEDBACK TO THE RELEVANT DEPARTMENT THROUGH THE SITE. IN THIS WAY THEY WILL BE DIRECTLY INVOLVED IN THE CREATION OF MUNICIPAL POLICY, SINCE WE WILL USE THIS FEEDBACK TO HELP IMPROVE THE QUALITY OF OUR SERVICES. ALL IN ALL, DASHBOARD IS A GREAT BREAKTHROUGH IN THE TRANSPARENCY AND ACCOUNTABILITY OF LOCAL ADMINISTRATION.”

Ivan Frangov, Mayor of the Municipality of Gevgelija



РЕПУБЛИКА МАКЕДОНИЈА
ОПШТИНА ГЕВГЕЛИЈА

СЕ ЗА ЖИВОТНАТА СРЕДИНА И КОМУНАЛНИТЕ ДЕЈНОСТИ НА ЕДНО МЕСТО ВКЛУЧИ СЕ !

ЖИВОТНА СРЕДИНА



ЗАШТИТА ОД БУЧАВА



КВАЛИТЕТ НА АМБИЕНТЕН ВОЗДУХ



КОНТРОЛА НА УПРАВУВАЊЕ СО ОТПАД



ЕЛАБОРАТИ И Б-ИНТЕГРИРАНИ ЕКОЛОШКИ ДОЗВОЛИ

КОМУНАЛНИ УСЛУГИ



СОБИРАЊЕ НА ОТПАД



ЈАВНА ЧИСТОТА



ВОДОВОДНА И КАНАЛИЗАЦИОНА МРЕЖА



ПРОИЗВЕДЕНА И ПОТРОШЕНА ВОДА ЗА ПИЕЊЕ



ЈАВНО ОСВЕТЛУВАЊЕ



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Development is about people and Development Stories brings people and their stories to the forefront—the people we work for and the people we work with.

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