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FAO says hello to a Japanese-funded project, goodbye to a Japanese Country Representative

On August 29, a signing ceremony was held at the Embassy of Japan for the new Government of Japan-funded *Improving Economic Growth in the Western Region of Afghanistan through Community Irrigation and Livelihood Enhancement* project. This project, like other Japan-funded irrigation projects in country, will use the Peace Medical Services (PMS) approach to repair and build irrigation structures. The PMS approach directly involves local end-users to they can be part of the design and building processes, ensuring local irrigation designs are closely tied to local irrigation needs and accessibility concerns. The PMS approach has already been successfully used in Nangarhar, where it has turned more than 15 000 hectares of land into green fields.



(L-R): Mr. Tomio Shichiri (FAO), Mr. Hamdullah Hamdard (MAIL), and Ambassador Sazuka (Japan) at signing ceremony held in August for new irrigation and livelihoods project in Herat.

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The signing ceremony was attended by Japanese Ambassador Sazuka, Acting Deputy Minister of Agriculture and Livestock for MAIL, Mr. Hamdullah Hamdard, and a small delegation from FAO, including Country Representative (FAOR) Mr. Tomio Shichiri. At it, Ambassador Sazuka spoke about the uniqueness of this project: it is working in a part of the Western Region that has been untouched by other development projects. In doing so, it will not only help a community that has significant development needs, but it will also be helping develop the economy of an area that has the potential to be a major corridor for regional trade. Mr. Shichiri followed up with remarks about how this new project would be using well-tested FAO methods for working at the community level, so the people of Afghanistan should expect to reap many benefits from the project.

This event was also, notably, FAOR Shichiri's last formal event in country. After fulfilling his four years of being Representative to Afghanistan, Mr. Shichiri has been assigned, as of September 1, to the FAOR position in New Delhi, India. Mr. Shichiri has long been a supporter of Afghanistan – he first began working in country when he came to Afghanistan to do emergency response and rehabilitation projects in 2006. He continued

coming in and out of the country for such projects until 2011, when he was permanently stationed at FAO headquarters in Rome. There he supported global operations on emergency response and rehabilitation programs. He began his term as FAOR in Afghanistan in November 2014, during which time he became well-recognized for dressing in the traditional Afghan *shalwar kameez* every day.

Mr. Shichiri's focus while FAOR was to broaden the degree of community-level participation in project design and implementation, improve water management to increase community resilience, and to build FAO national staff capacity to do high-quality work. As one Kabul-based staff member said "Tomio has always asked for national staff opinions and consensus, and worked with us to make sure our work steadily improved. I appreciate that he values my opinion and I've really learned a lot from him."

Mr. Shichiri was able to significantly expand the number of Japanese-funded projects implemented by FAO Afghanistan, which has been positive for both countries. And, given his emergency response background, Mr. Shichiri also focused on building up the resilience team so that they were more able to nim-

bly analyze disaster impacts and respond to them in ways that not only addressed emergency needs but also built community resilience to future disasters. This sort of approach, which is so important for Afghanistan, aims to help communities become self-sustaining and less prone to conflict over natural resources.

Said Mr. Shichiri of his time in Afghanistan "I aimed to work on the humanitarian-development-peace nexus. One example was establishing a platform for multilateral meetings on Transboundary Animal Diseases. Initially I was the bridge between Afghanistan and its' neighbors, but after a few bilateral meetings, we now have a functional multilateral group. Because Afghanistan is central to Central Asia, this work can be a catalyst for further development of regional peace and cooperation."



Mr. Tomio Shichiri at multilateral Transboundary Animal Disease Conference held in Istanbul in late June. This conference and the science diplomacy work it supported was one of his proudest achievements as FAOR.

And FAO Afghanistan welcomes new Country Representative Rajendra Aryal!

And, as one FAOR left, a new FAOR has joined us! FAO Afghanistan is honored to welcome Mr. Rajendra Aryal as the newly-appointed FAOR, as of mid-September.

Mr. Aryal, a Nepal native, has a BS in Civil Engineering from the National Institute of Technology, Trichy, India and a MS in Civil and Infrastructure Engineering from Liebnitz University, Hanover, Germany. Mr. Aryal is also not new to Afghanistan. He first joined FAO in 2003 as the Area Manager in Herat. Since that time he has worked for FAO as an advisor and/or senior resilience and recovery coordinator in nearly 30 countries around the globe.

Previous to joining FAO, Mr. Aryal started his career in 1991 as an engineer in Nepal, and until 1997 he served in both the public and private sectors in different capacities. From 1997 to 1999, he worked as a Programme Officer for the German Agency for International Cooperation (GIZ), and from 1999 to 2001, he worked as a Programme Officer for the United Nations Capital Development Fund (UN-CDF/UNDP) in Nepal. In 2002, he joined GIZ International Services in Kabul.

Within FAO Mr. Aryal has also been Deputy Head of Office in South Sudan (2013) and FAO Representative *ad interim* in the Philippines (2014). Before starting his new role with FAO Afghanistan, Mr. Aryal was based at FAO headquarters in Rome, where he was, since 2015, the Senior Programme Advisor for the global Food Security Cluster and the Resilience Team (SP5). While his most recent work focused on food security and resilience building, he also has a robust background in rural agriculture development projects, and inter-agency partnership and collaboration.

Mr. Aryal formally presented his credentials as the new FAO Representative to the Acting Minister of Foreign Affairs and Deputy Foreign Minister H.E. Hekmat Khalil Karzai and the Minister of Agriculture, Irrigation and Livestock, H.E. Naseer Ahmad Durrani on 30 September 2018. During each ceremony, Mr. Aryal listened to requests from the Ministers, and expressed FAO's commitments to continue close collaboration with the Government to provide technical support and capacity-building across food security and agricultural topics.



(L-R): Mr. Rajendra Aryal (FAO), Mr. Hekmat Khalil Karzai (Ministry of Foreign Affairs) at a brief credentialing ceremony held on September 30th.

Mr. Aryal has noted that his focus while here will be working cooperatively with all development partners to build resilience, sustainable livelihoods and peace. He's come at a time when much of the country is affected by drought and facing serious food insecurity, and his expertise and experience at responding to such crises, while also building future resilience, will be of immediate use.

The FAO Afghanistan team is thrilled to have the opportunity to work with Rajendra, and believe his previous experience in Afghanistan, as well as his extensive experience working in development and resilience-building across the globe will bring about positive progress in sustainable agriculture, food security and resilient livelihoods in the country.



Mr. Rajendra Aryal (FAO) shakes hands with H.E. Naseer Ahmad Durrani during the MAIL ceremony.

FAO emergency animal feed distribution has begun in Kandahar



Livestock owner in Kandahar sitting on some of the bags of concentrated animal feed he received from FAO.

This year, once again, the country is experiencing a severe drought. This drought has led to crop losses, pasture degradation, and animal sickness and deaths, all of which further lead to losses in incomes and livelihoods, particularly for smallholders. Widespread food insecurity, Internally Displaced People (IDPs) and resource stress in urban centers that receive these IDPs are other consequences of the drought.

FAO is responding to the crisis by targeting those people whose agriculture-based livelihoods have been most affected by this drought. FAO is focusing their response on 12 provinces that have been identified as those most in need of assistance by the Food Security and Agriculture Cluster (FSAC) in Afghanistan. FSAC has determined needs by looking at a number of factors, including self-reporting on food insecurity and distress coping strategies, satellite vegetation condition maps, ground-based data on precipitation deficits, self-reporting from smallholders in likelihood of losing their livelihoods, as well as several other factors.

FAO's emergency drought response is coming in the form of concentrated animal feed for pastoralists, and wheat seed and fertilizer for wheat growers. FAO's response is designed to help people retain their livelihoods, in their home villages,

throughout the upcoming fall planting season. The response tries to ensure that fewer people become IDPs, fewer families resort to negative coping strategies that threaten community stability and peace, and fewer communities need assistance in the years ahead.

FAO has begun this drought response in Kandahar, where close to 38 000 people are in urgent need of livelihood assistance. Kandahar, like all of the other target provinces, suffers from low to non-existent irrigation and ground water sources for growing crops, and poor pasture conditions that make feeding livestock difficult at best. Owners of animals in poor condition will distress sell them at low prices to prevent total loss of the animal. However, such sales result in lower incomes for farmers, less purchasing power to buy food, and a depletion in breeding stocks of animals for the coming year. And ultimately, severe food insecurity province-wide.

FAO is first responding to those smallholders who most urgently need help by giving out bags of concentrated livestock feed. Each livestock owning family is getting enough concentrated livestock feed that, when mixed with straw, is enough to feed their small herds for 3 months, ideally getting them through this upcoming "lean" season. So far, FAO has distributed 400 metric tons (MT) of animal feed to

4000 smallholder-farming families in four districts (Spin Buldak, Maiwand, Zharie and Daman) of Kandahar.

FAO's emergency drought response is being supported by many donors, including the United States Agency for International Development (USAID), the governments of Japan, Italy and France, the UN Office for the Coordination of Humanitarian Affairs (UNOCHA) via their Central Emergency Response Fund (CERF) and their Central Humanitarian Fund (CHF), and FAO's own Special Fund for Emergency and Rehabilitation (SFERA).

Kandahar is just the start of FAO's response. The FAO team is pulling together to mobilize as many resources as possible. By the end of the fall, FAO expects to have reached 1.2 million people in all 12 target provinces with certified wheat seed, fertilizer and concentrated animal feed, hopefully alleviating acute food insecurity and helping families continue their livelihoods independently, without assistance, tomorrow and long into the future.

Success story: barren desert converted into green farmland in Badakhshan

The Shahr-e-Naw irrigation scheme in Faizabad district is one of the largest irrigation schemes in Badakhshan. The scheme serves 13 large and 4 small villages that lie along the main canal; the entire canal system stretches a total of 22.3 km, including branch canals.

In this scheme, built nearly 50 years ago, water is diverted from the Kokcha river through a side intake which leads into a 3850m long canal/retaining wall. The area of land irrigated by the scheme (also known as the "command area") has always been located on both sides of the Kokcha river. However, there were issues with the right-side command area. This

For 40 years, the community and different agencies had been trying, through support from different organizations, to find a way to solve this irrigation challenge. They never succeeded.

One reason for their lack of success was the extremely complicated nature of the project. The geography required that whatever conveyance system was built use a series of both elevated pipes and buried pipes along fragile areas, and small and large cross drainage structures (aqueducts and super passages) in deep washes. The system had to be built in a difficult and remote environment, and the design had to literally defy gravity.

mand area, the water flow was reliable for the first time ever, allowing local farmers to carefully plan and grow crops according to a predefined flow schedule. The new irrigation works increased both the productivity and diversity of crops produced: local residents are now cultivating wheat, barley, maize, vegetables, alfalfa and fruits, and local livelihoods, food security and nutrition are much improved.

Post-intervention interviews show a pleased local community. As one resident noted: "we are very happy about this new irrigation system. It is a dream come true - what was once barren desert is now lush and green, and we can feed our families and earn money like never before. We only hope FAO and MEW can continue this good work in other places in our country that badly need it."



Shahr-e-Naw intake before the project.

side received water through a pipe system that crossed the Kokcha river in an area where the water flow is quite strong, but because of logistical challenges, was still insufficient to meet the needs of farmers who were on the far edges of the command area.

These logistical challenges were largely due to the mountainous terrain, which resulted in the edges of the command area actually being located above the river. Gravity, therefore, could not get water to these far edges, and despite the fact that the Kokcha river is large, the terraces close to it were paradoxically barren. Therefore, improved structures and a larger conveyance system were needed to bring more water to the existing downstream users, as well as expand the command area into the Qurogh deserts (Dasht-e-Shohada, Dasht-e-Qurogh and Dash-e-Layaba).



Shahr-e-Naw intake after the project.

In 2011, the community approached FAO and the Ministry of Water and Energy (MEW), through their joint Irrigation Restoration and Development (IRDP) program and requested help. And, IRDP was able, for the first time in 40 years, to provide renovate this system. MEW, with technical assistance from FAO, did the initial assessment and surveys, then designed and built a system that addressed the needs of the community, while being adapted to the challenges of the terrain. Construction of the scheme was completed in 2017.

This intervention from FAO and MEW was successful in bringing more water to those who needed it. It grew the total command area to 1850 ha, which was a 963 ha increase in the area of irrigated land in winter, and a 363 ha increase in the area of irrigated land in the summer. And in addition to increasing the com-

FAO and Peace Medical Services toured historic irrigation in Japan

On 27 July, a small technical team from FAO, the Ministry of Agriculture, Irrigation and Livestock (MAIL), MEW, and the Ministry of Rehabilitation and Rural Development (MRRD) participated in an study tour in Japan. The aim of the tour was to learn directly from the Japanese about their experience formulating the Peace Japan Medical Services (PMS-Japan) approach, as well as to learn about associated agricultural practices and farmers' associations in Japan.

The team also went to learn about the Yamada Weir. The Yamada Weir and Triple Waterwheels are nationally-designated

historical sights in Asakura city, Fukuoka prefecture. Yamada Weir and its associated irrigation works transport water to rice fields from the Chikugo River, one of only a handful of rivers in Japan that has a likelihood of overflowing its' banks. The Yamada Weir, built in 1790 out of stone, is a water channel along the river that is inclined 20 degrees to the current. This small angle helps alleviate high water pressure and control flooding using very simple technology and cheap materials. The weir carries water to nearly 500 ha of rice fields. The Triple Waterwheels on the weir were based on innovations by local residents, and helps carry water to an additional 35 ha of rice fields.

The PMS approach, which is used in the area around the Yamada Weir, combines community participation, farmers groups and irrigation principles that build the overall health of the community. The PMS approach and the Yamada Weir have been replicated by several Japan-funded projects in Afghanistan because they are cost-effective, participatory and achieve impressive results. The first one of these projects began in Nangarhar, where the approach turned desert into productive farmland.

During the study tour, the team visited Japanese International Cooperation Association (JICA) headquarters, the Yamada Weir, the Asakura Triple Water Wheels, a beekeeping farm and honey processing center, grape and pear farms, and the Asakura farmers market. Post-tour, technical staff from relevant ministries in Afghanistan were taught about the results of the trip, which will help them more successfully and quickly replicate the PMS model, as well as weir construction, at more sites around Afghanistan.



The well-irrigated rice fields of Yamada, Japan.

FAO sets up household clean energy equipment to make Nangarhar's air cleaner



Delegation from FAO, PAIL and others visiting newly-constructed biogas digesters in Nangarhar.

This past quarter FAO, through its' Global Environmental Facilities (GEF)-funded project entitled "*Reducing GHG emission through Community Forestry and Sustainable Biomass Energy Systems,*" constructed 40 biogas digesters in Dara-e-Noor district, Nangarhar.

While biogas digesters are hardly new technologies, they are new for Afghanistan. They are also extremely appropriate for Afghanistan, where vast herds of sheep and goats, as well as cattle, can provide ample fuel for the digesters. Using animal waste in this way mitigates greenhouse gas emissions, and provides communities with a cheap, renewable source of clean energy.

The communities where FAO has constructed the biogas digesters are very much in favor of them. Not only do the digesters use abundant animal waste and keep household air cleaner, but they also save families time from collecting and/or purchasing wood and expensive natural gas. And, in addition to providing energy for cooking, lighting and heating, the degraded end product from the digesters can be used as fertilizer. This fertilizer is much more efficient and environmentally-healthy than undigested manure.

So far, three digesters have been constructed in Dara-e-Noor. Following construction, on 29 August, a delegation comprised of FAO staff, the Nangarhar PAIL director, the technical services provider Welthungerhilfe, Forest Management Association members and

community elders visited the biogas digesters. The delegation went to observe proper biogas digester construction, visit households who received energy efficient thermal devices (solar cookers, clean cookstoves and tandoors) through the project, and to monitor the efficiency and usage of these devices.

The households that are receiving power from the biogas digesters reported being very satisfied with the project. When interviewed about the impacts on their lives, one community member said that "the biogas digester is fantastic because it saves us so much time! It produces gas for 4-6 hours every day, which is enough for our cooking and hot water needs." Interviewees were equally pleased with their new energy-efficient cooking devices.

It is also important to note that 4-6 hours of biogas equates to 56 kilograms of wood, which is what a typical family will use for cooking each day. So, this new technology not only helps communities save time and money and improve household air quality, but it also helps them save trees, prevent erosion, and protect the valuable topsoil of Afghanistan. Preserving local forests therefore makes local crop production and pastures more productive, bringing further community benefits, and restoring Afghanistan's environmental health.

Kolon Kosh village: still powered up and prospering, years after project completion

In October 2013, the *Programme for improvement of irrigation systems and micro-hydropower in Kabul and Bamyan* was completed and closed. In addition to rehabilitating 40 canals and training approximately 35 mirabs and Community Development Council (CDC) members on the operation and maintenance of these new irrigation structures, the project also built 13 micro-hydropower stations in Bamyan. These stations each powered small villages that previously had no power, or very limited electricity from a handful of personal generators.

One of these villages was Kolon Kosh village, a small mountain hamlet a 20-minute drive away from Bamyan Center. This village, comprised of 150 households, had always had abundant water thanks to their proximity to high mountain snowpack. However, as is true everywhere in Afghanistan, water management was becoming an issue; spring floods coupled with removal of shrubbery from slopes resulted in rampant soil erosion and early season water losses that led to water deficits at the end of the dry season. On top of it all, the village had almost no power, meaning that children couldn't do homework in evenings, cooking was done with wood fuel and animal dung, and households couldn't work after dark.

FAO, in partnership with MAIL and MEW, built a canal that efficiently channeled water to the village from high mountain reaches, and passed through a small micro-hydropower station on the way. The force of the water speeding down the steep canal turns a turbine that generates power which is transmitted down to the village on power lines that were also erected as part of the project. The turbine is shut off in the daytime so that farmers can use the water flow to irrigate fields. In the evening, the turbine is turned back on, the water slows, and electricity flows instead.

An FAO team recently went to Bamyan to survey current and past project successes. The team found that five years after the project has closed, the canals and generator station are still clean, regularly repaired and working. Mohammad Ali, a local farmer, is the generation station manager, and he, along with other project beneficiaries, including the Deputy CDC leader, sat down with FAO for a brief chat.

Mohammad, the CDC Deputy, two local teachers (one woman), and the two local farmers in this small group all had worked with the Project to help with site selection, construction, and/

or quality control. All of them vigorously agreed that the project had lasting positive effects: soil erosion has decreased locally, they have abundant drinking and irrigation water year long, and best of all, reliable lighting every night. Said Mr. Ali: "I don't mind getting up to turn off the turbine wheel every morning at 0500 if it means my family has whatever light and power we need all evening." One of the teachers commented that it made his life easier too, because now he could work to prepare lesson plans and grade school work after dark. No assessments of student performance pre- and post-project were done, but the new power likely had a positive impact on that too.

Mohammad went on to explain how they've made the project sustainable: every year, the CDC collects AFN 1500 (~USD 22) from each household. This money is used to pay for routine maintenance of the station and provide a small stipend to Mohammad for his work. When major repairs are needed, the CDC convenes to assess the cost, and then asks the community to equitably provide extra money for the repairs. According to the group, this system has worked well. While the community is not wealthy, they have been able to buoy their incomes due to increased agricultural productivity from well-controlled water, as well as work after dark on small business ventures, and the money they pay is well worth the benefits the station brings.



Mr. Mohammad Ali, local farmer, and turbine room manager, turning on the village power for the evening.

The sheep and goats of the Eastern region get their vaccinations

In August, the Transboundary Animal Diseases (TADs) project performed a vaccination campaign against Foot and Mouth Disease (FMD) and Peste des Petits Ruminant (PPR) in the Eastern region. The campaign was carried out by mobile Veterinary Field Units (VFUs), in close collaboration with the Provincial Ministries of Agriculture, Irrigation, and Livestock (PAILs). The VFUs travel to small villages and Kuchi encampments in order to reach pastoralists (animal keepers) who would otherwise be unreachable. The work of the VFU technicians, though difficult, plays a huge role in preserving the livelihoods of thousands of small and larger-scale pastoralists, and helps ensure local food security during a year when much of the country is suffering from serious drought.

The goal of the TADs program in general, including this vaccination campaign, is not only to vaccinate cattle, sheep and goats from FMD and PPR, respectively. It also strives to train pastoralists in recognizing the signs of disease, give them information on where and when they can find veterinary field units to help them treat diseases, and to persuade them to engage in local milk producers cooperatives in order to increase their food security and incomes. Further, the TADs program works through MAIL and PAIL and is developing institutional capacity within the Government so that they will be able to manage vaccination campaigns and related follow-up entirely on their own in the near future.

In Nangarhar alone, the TADs program gave out over 85 000 doses of FMD vaccines to cattle in three age classes (0-12 months, 1-2 years, and over two years). Vaccinations were given out in eight districts where veterinary technicians could safely access animals. And, in addition to giving out vaccinations, monitoring and evaluation was performed in order to estimate the value of the project: nearly 400 pre-vaccination blood serum samples were collected, as well as 132 post-vaccination samples. These samples were all delivered to

the Central Veterinary Diagnostic and Research Laboratory (CVDRL) in Kabul in order to both evaluate the baseline prevalence of FMD, as well as assess the efficacy of the FMD vaccine.

PPR vaccines were given to small ruminants in four provinces of Nangarhar, Laghman, Kunar and Nuristan. Once again animals were divided into the same three age classes and were given vaccines calibrated to their age and weight. In total, 220 000 small ruminants in Nangarhar, 245 000 in Laghman, 200 000 in Kunar and 105 000 small ruminants in Nuristan were vaccinated against PPR. Blood serum samples were again taken and delivered to CVDRL to determine baseline levels of PPR in the animal populations (312 samples) as well as post-vaccination efficacy (104 samples).

This approach, which combines vaccinations, training sessions about recognizing and treating disease, and the distribution of pictorial brochures to help pastoralists recognize disease, has been very useful

for the communities the TADs project has touched. Not only have beneficiaries reported improved food and income security, but the level of these diseases has been so reduced that there have been zero reports of FMD and PPR by the VFUs or livestock owners in provinces where these vaccinations were delivered. These results are also testimony to the skills of MAIL and PAIL partners, as well as the VFUs, in delivering vaccinations and testing for disease.

Thanks to this great collaborative effort, the provinces where TADs has worked are now one step closer to being completely free of these diseases, which would be a huge win not only for Afghanistan, but for all countries in the region that are part of the migration and transport routes for these livestock and their products.



FAO consultants helping Afghans assess livestock health in an early FAO mission to Afghanistan in 1952.

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