

From a Birthday Conference to an Apricot Plantation - An unusual business trip to Kyrgyzstan and Tajikistan (with a lot of food)

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In this report, we find out how the most unusual setup for a business trip comes to the most satisfying results. Why? Because Central Asia is the place where “everything possible and impossible comes out of the oil lamp” – even in the countries that don’t have oil. They replace it with cooking oil because after all, the essential aspect of Central Asian culture is hospitality.

In short, the trip was planned long before I joined GeoZS in September 2024, and – happy with my new employment – we decided to add a bit of GeoZS flavor to it: a MASPREM poster and openness for new cooperation. It paid off!

Kyrgyzstan: Always a reason to celebrate

The saying goes, if Central Asia was an apartment, then Kyrgyzstan was the courtyard: there is always something going on, people meet, and thereby new ideas, strategies, opportunities, and institutions are created.

Some of them were new already decades ago, and so it happened that the Central Asian Institute of Applied Geosciences (CAIAG) celebrated its 20th anniversary in 2024 by holding a birthday conference on the occasion. The institute was founded by the Government of Kyrgyzstan and the German Research Centre for Geosciences (GFZ) to conduct research in the fields of geodynamics, geohazards,

climate change, hydrology, geocology, resource protection, and many more. Most of those disciplines were represented on the 8th and 9th of October in various sessions by presentations and posters at the International University of Kyrgyzstan (IUK) with the overall topic “Past achievements and future challenges of applied geosciences in Central Asia” and “Five Years of Action for Sustainable Development of Mountain Regions (2023-2027)” (CAIAG, 2024; GFZ, 2024). Researchers, experts, governmental officials, and students from over 15 countries participated in the event; amongst them were colleagues from Kyrgyzstan, Uzbekistan, Kazakhstan, Tajikistan, Russia, Switzerland, Italy, Germany, Japan, and me representing Slovenia with two contributions (Fig. 1a-b):

- CataEx: How to quickly start the Google Earth Engine with JavaScript? (Domej & Pluta, 2024)
- MASPREM – the Slovenian Landslide Forecasting and Warning System (Peternel et al., 2024)

Originally, the content of my presentation drew from another project at my previous place of work as a post-doctoral researcher at Adam Mickiewicz University (AMU) in Poznan, Poland, where we looked for ways to map landslide debris falling on glaciers (Domej et al., 2023). One outcome was,

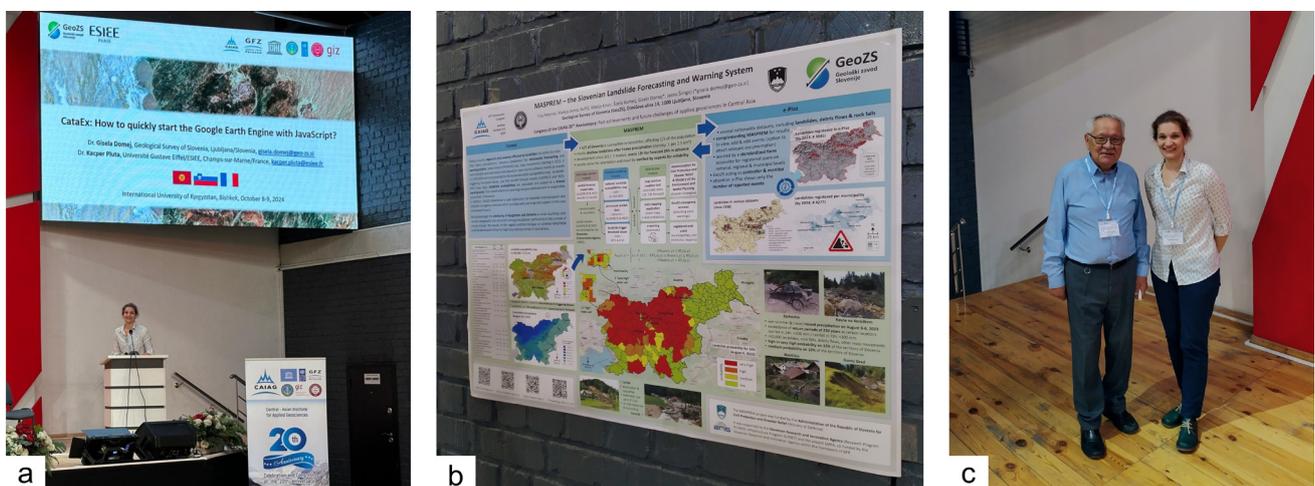


Fig. 1. Conference hall at the International University of Kyrgyzstan (IUK) where I presented my Google Earth Engine code (a) and our MASPREM poster (b); I also met Dr. Isakbek Torgoev (c).

more broadly, a routine coded in JavaScript that performs a variety of useful computations in the Google Earth Engine such as retrieving satellite imagery from the Google Earth Engine Catalog, masking clouds on the images, pixel statistics, index computation, export to other GIS software, and several different tasks. Although initially designed to serve for specific purpose in the Polish project, we found that applications can be much broader, which was reflected by vivid questions from colleagues working in fields ranging from climatology via resource prospection to environmental protection. As I found out the day after my presentation, my session had been filmed by the Kyrgyz broadcaster ELTR (2024) and besides Dr. Bolot Moldobekov, the director of CAIAG, I had the chance to appear with some birthday wishes living up to the Slovenian motto “yes, we can!”.

The same day, the poster session took place, and against our expectations, the poster on the Slovenian landslide early-warning system MASPREM (GeoZS, 2024) attracted even more attention than my presentation. How smart that we decided to bring along some GeoZS spice to the trip!

Visitors at our poster were numerous, I brought back a stack of new visit cards, and the stock of GeoZS booklets had disappeared rather quickly. By chance, I also met Dr. Isakbek Torgoev (Fig. 1c), one of the best landslide scientists in Central Asia. He promptly offered me his new book on the topic as a gift.

Later that day, the actual birthday party was held on the premises of CAIAG, and like the conference itself, the organization was impressive – the food and music alike (Fig. 2).



Fig. 2. Traditional Kyrgyz orchestra in the gardens of the Central Asian Institute of Applied Geosciences (CAIAG).

While visiting the fast-changing city center of Bishkek with its fancy high-rise buildings between the typical monumental structures that link history back to the Soviet Union (Fig. 3a-b), I got a call

from my colleague Dr. Ruslan Umaraliev (author of an article in this issue of *Geologija*) a disaster risk specialist working at Osh State University (Osh-GU) and the unit of Disaster Risk Reduction and Management of the World Food Program (WFP). He told me he would be coming to Bishkek, and that we should meet for a project dinner. No sooner said than done, and over some delicious Kyrgyz shashlik we concluded that we could set up a project as landslide early-warning stands at the very top of the governmental agenda of Kyrgyzstan for the next years. He would connect to the Ministry of Emergency Situations (MES) of the Kyrgyz Republic. Handshake, “Yes we can!”.



Fig. 3. Historic timeline of Kyrgyzstan on Ala-Too Square in central Bishkek – prehistoric times documented in the State History Museum (a-b), the national hero Manas on his horse, Lenin as a representative for the communist past of the country, the flag of the independent Kyrgyz Republic since 1991.

Uzbekistan: Tovarna bovdenov in plastike

Saturday 12th was the day to travel to Tajikistan, where I would carry out a mapping job for the NGO Hilfswerk International (HWI). More precisely: in the very north of Tajikistan, to where no connection by plane exists from Bishkek. Therefore, the solution was to fly to Tashkent, the capital of Uzbekistan, travel by car southwards to the

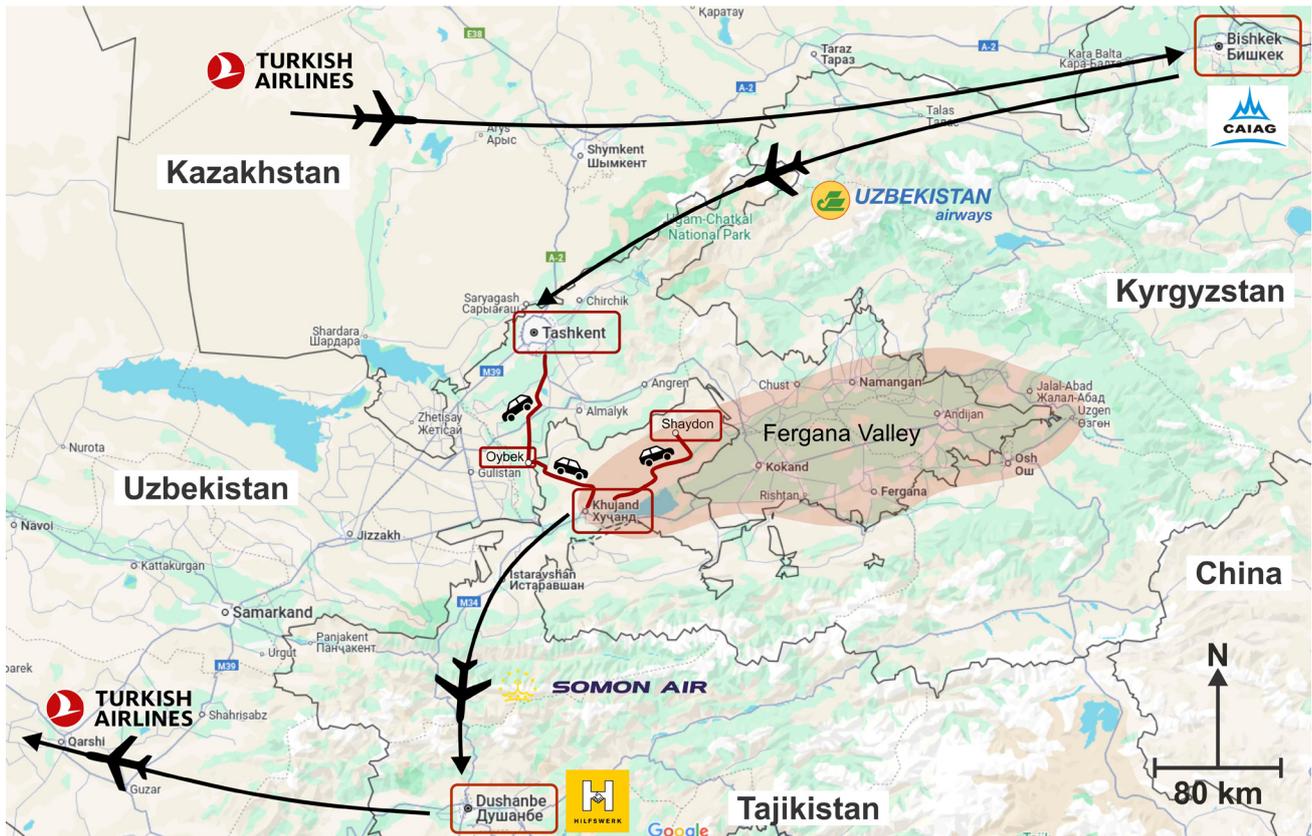


Fig. 4. Travel route from October 6th to 19th, 2024, from Kyrgyzstan via Uzbekistan to Tajikistan.

border crossing at Oybek and then onwards to Khujand, the capital of the Tajik Viloyat Sughd (Fig. 4). As such, this plan seemed very feasible, not too long, and quite comfortable, as HWI booked all segments of transportation and accommodation – had there not been a day-long confusion about my origin.

While at Bishkek Airport, everybody was relaxed, passport controls in Tashkent took it already to a different level:

- Passport! Look camera!
- (So, I looked into the camera.)
- You first time in Uzbekistan?
- No, it's the third time.
- What you do?
- I'm a geologist.
- Where you from?
- I'm from Austria.
- No, where you from today?
- I came from Bishkek.
- You not have return ticket. Where you go?
- Tonight, I travel to Oybek and exit to Tajikistan.

Maybe the precise location convinced him, and very energetically I got my passport stamped. Outside the terminal, my driver was waiting and we set off south on the sparsely illuminated motorway, which interestingly has bus stops and zebra

crossings. Around 10:30 pm, we reached a slightly more lit-up parking lot in front of an iron gate, the location the furthest the driver could go. Behind the gate started the border zone, where – to my surprise – had accumulated hundreds of people with their belongings all waiting in a queue to be admitted in groups to the Uzbek exit checkpoint. And the crowd even grew larger, as a yellow bus with a post horn arrived on whose front screen it showed “*Der Deutsche Postbus fährt für Sie*”. Just behind it parked his cousin, a truck from *Tovarna bovdenov in plastike* (Fig. 5), a Slovenian cable producer.



Fig. 5. A Slovenian second-hand truck at the Uzbek border post in Oybek (secretly photographed out of the queue; therefore blurred).

While I was reflecting on globalization, the selling of discarded vehicles from Europe to Central Asia, I eventually arrived at the passport control after one long hour with a few stains of motor oil on my pants:

- Passport! Camera!
- (I looked at the camera again.)
- Where you from?
- From Bishkek. (Hoping that this time I gave the proper answer.)
- No, not possible. Where you live?
- In Slovenia.
- But you have passport from Austria?
- Yes, I'm Austrian.
- You enter Uzbekistan when?
- About four hours ago by plane.
- And now you go out Tajikistan?
- Yes.
- Do what there?
- It's for a food project.
- You not like here? Our food also good.

Unsure if border officers are supposed to joke, I just confirmed that, yes, if Central Asia was an apartment, Uzbekistan would definitely be the kitchen, and he gave me the next stamp and sent me further. As there was nothing to be seen except for a pavement leading in the complete dark, I asked where to find the Tajik entry checkpoint just to receive the simple answer: "*dalshe, dalshe, podalshe*". With that prospect, I remembered well my first Slovenian word that I learned on day one of my employment – *podaljšek* (Slo. extension cable) – thinking that maybe the truck of *Tovarna bovdenov in plastike* could have brought some of them to install a bit of light in that section of no-man's-land. Another thought was that a four-wheel-drive car would be comfortable, but as car crossing is a hassle there, at least a suitcase should have a four-wheel-drive function. At the next streetlight the Tajik border post came in sight, and I prepared for the interview with all my previous knowledge:

- *Ba kamera nigared!*
- Sorry, do you speak Russian too?
- You are not Tajik? Where are you from?
- I'm Austrian, I live in Slovenia, and I traveled from Bishkek through Uzbekistan in one day.
- Alone? At night? As a woman!?
- Yes, a driver is waiting outside for me.
- What will you do here in the north?
- I'm a tourist.
- But what would you visit here?
- A fruit plantation.
- Plantation?
- Yes, *zardolu* (Taj. apricot). I like fruit.

The officer threw me a skeptical glance and hit the fourth stamp of the day into my passport. Outside I met the second driver who would take me to Khujand, where the local colleagues of HWI proceeded to the official beginning of my stay – to a dinner at 1 am because hospitality cannot be food-less.

Lessons learned from the day:

1. We Europeans have the luxury of extremely powerful passports. We are so pampered and used to crossing borders with minimal effort, that we have forgotten that for most people crossing borders is an experience worse than mine that day.
2. Even though the experience was lengthy, I could still see it with humor because, with my privileged passport, I was sure to be able to cross, whereas for others a long wait with several hurdles does not automatically result in the allowance to enter another country.

Being a geologist, and traveling the world for work, sometimes teaches aspects of life, and although the trip was overall a very happy time with celebrations every few days, it was this 1 km in the no-man's-land between two countries that exemplified the fact that some travel for leisure, and some others it is an uncomfortable necessity.

Tajikistan: How to transport 7 kg of fruit as a hand luggage

"We need our geologist because we are not scientific enough." Sometimes I feel that reasoning amongst the HWI Team, although I don't agree with its justification. All our team members have an academic background. The question is just how to combine tasks properly to achieve good results.

Initially, I came to know the Austrian NGO in 2011 during my Master's project at the University of Natural Resources and Life Sciences (BOKU) in Vienna, Austria. Back then, the representative office in Central Asia in Dushanbe, the capital of Tajikistan, assisted us in implementing the EU-funded natural-hazard project PAMIR (HWI, 2024a) in the Gorno-Badakhshan Autonomous Region in Eastern Tajikistan, which eventually allowed me to successfully write my diploma thesis (Domej et al., 2019) and finish my degree. Since then, we have always been in close contact, and over time I grew into the activities of HWI on a voluntary basis, having a hand in web administration, data management, and a variety of other tasks that need a little scientific input such as the current efforts to map production areas of different sorts of fresh and dried agricultural products.

What is here then geologic? Not so much, admittedly. But the ambitions of HWI deserve support and acknowledgment. Over the last decade, it engaged in a series of EU projects in the field of farming, food production and processing, food safety standards, export of goods, and the support of small and medium-sized enterprises in the four countries of Tajikistan, Kyrgyzstan, Uzbekistan and Kazakhstan (HWI, 2024b). With dedication and constant endeavor, new strategies find their consideration nowadays in government agendas and a specifically created working group – the Central Asian Working Group (CAWG) – is recognized by the United Nations Economic Commission for Europe (UNECE) in Geneva, Switzerland.

One of the newest undertakings driven by HWI and the CAWG is the branding of local food products with registered geographical indications (GI), that link a product to a specific origin – similar to Styrian Pumpkin Seed Oil from Austria. And where an area of production is strictly defined, an accurate map is needed. That’s where someone would like to borrow a geologist!

While last year, we mapped the area of production of the Khorezm Melon in the Xorazm Region and the Autonomous Republic of Karakalpakstan in Uzbekistan, this year, we targeted the Ashtak Dried Apricot in Tajikistan’s northernmost district Asht in the Tajik Fergana Valley. As the area of production is located on a single slope and, therefore, considerably smaller than the one of the melons, our task consisted of visiting the plantations and drawing a clear distinction between Ashtak Apricots and other sorts.

With a bunch of modified satellite imagery created with the Google Earth Engine Code I had presented a few days earlier at the CAIAG’s birthday conference in Bishkek, we hit the road up north from Khujand to a plateau resembling the Planet Mars not only due to its reddish gravel but also due to the complete emptiness in terms of infrastructure. The expression “hitting the road” turned out to be taken very seriously, although, for most of

the time, it remained unclear whether we hit the road or the other way around (Fig. 6). The herd of goats, that appeared out of nowhere during a heavy rainstorm, was – however – handled with the best care possible.

Once having passed the plateau, plantations started to emerge throughout the rough terrain. Ravshan Hasanov, an irrigation specialist, and I took action for the day: he driving, I mapping – or more precisely, stopping at farmers’ plantations, visiting processing units including a giant fridge (Fig. 7a), conducting interviews (Fig. 7b), snacking here and there dried apricots and other fruit, counting irrigation canals and roads which serve as addresses in the area, refusing more snack invitations but accepting more dried apricots in various formats of packaging as take-home-gifts, crossing through gardens (Fig. 7c) and carefully navigating over canal embankments to the maximum extents of the Ashtak plantations (Fig. 7d).

The day had two highlights: the topographic one at the top end of the plantation slope with a breathtaking view into the valley above (Fig. 8a), and the other – how could it be different – a culinary one in the form of an extended lunch in the town of Shaydon, the capital of the Asht District, which seemed not to have changed much since Soviet times: decorated citizens are displayed beneath an impressive mosaic (Fig. 8b), and even the entire irrigation system is a result of industrialized agriculture from decades ago. Here, having Ravshan as a guide turned out to be perfect. During the hours of driving through barren but fascinating landscapes (Fig. 9), I learned a lot about recent local history and agricultural practices. He also made an extra detour before returning to Khujand to show me the Kayrakkum Reservoir on the Syr Darya which partly forms the border between Tajikistan and Uzbekistan a little further up north (cf. border in Fig. 4). While driving over the dam crest, we met another cousin of the German Postbus: a FlixBus from Poland.



Fig. 6. Welcome monument to the Asht District on the road from Khujand to Shaydon.



a



b

Fig. 7. Fieldwork to map the Ashtak plantations in the Asht District – fresh apricots (a), interviews with producers (b), comparing satellite images with plantation lots (c), irrigation canal embankments used as connection roads between lots (d).



c



d



a



b

Fig. 8. Valley above Shaydon (a) with different fruit plantations; mosaic remaining from Soviet times advertising farming activities and a wall of honor for decorated citizens (b).



Fig. 9. Return trip to Khujand with a mountain ridge resembling a colorful puff pastry; in these countries, not even the landscape can escape culinary art.

For once, the following day was not about oil, but about a derivative of it: kerosene. The previous day, the HWI office called us in Asht asking whether I preferred to fly to Dushanbe instead of going by car – as it turned out later with a Tajik Boeing 737.

At the check-in, the ground staff insisted on taking my 7 kg of apricot gifts with me into the *salon* rather than sending it into the hold luggage. Although I tried my best to explain, that I had already two pieces of hand luggage, the final answer was: “Better take it, the apricots might get wet, it’s raining today.”

I pushed away the idea that rain could penetrate the plane and strolled into a waiting area, where it became immediately clear that a total of 15 kg of hand luggage was still quite modest. – Conclusion of the flight: the most children on all my flights, one of the shortest flights ever (i.e., only about 40 minutes), not a single turbulence, but the luggage was indeed delivered wet. Everything is possible, also with kerosene in the oil lamp.

Arriving in Dushanbe was a real time travel. Not only is the contrast between Khujand (Fig. 10a-c) and Dushanbe quite striking, but the city had also changed enormously since my last visit in 2011. High-rise buildings flank the streets,

sparkle at night like in the Gulf States, and many old Soviet-style panel houses gave way to gigantic new buildings and monuments that difficultly find lookalikes in Europe (Fig. 11a-d). If Central Asia was an apartment, Tajikistan could cover even two elements: the balcony with its high Pamir Mountains as well as the reception hall to impress guests.

As a geologist, I just wondered whether those fascinating constructions could resist strong earthquakes. In October 1948, an earthquake of magnitude 7.3 heavily destroyed Ashgabat (Marshall et al., 2024), the capital of Turkmenistan, and so did another one of magnitude 5.2 in April 1966 in Tashkent (Kulahmatovich & Bohodirovich, 2021). Several decades later, after a rapid increase in population and infrastructure in big cities, such high magnitudes could cause tremendous damage. Unfortunately, this seems to be a real threat for Dushanbe, as the city is located in close vicinity to two active fault systems with which magnitudes as high as 7.5 (Bindi et al., 2012) are associated.

The head of HWI in Tajikistan picked me up from the airport, just to announce to me that they had organized a brand-new apartment of 60 m² in such a high-rise block: € 40 per night, and a supermarket in the basement, where a liter of milk



Fig. 10. City center of Khujand – mausoleum of Sheikh Muslihiddin next to the central mosque on Panjshanbe Square (a), cable car over the Syr Darya to the northern part of the city (b), public display of statistics on cotton farming (c).



Fig. 11. Sparkling Dushanbe – the newly constructed parliament (a) and the high-rise triplets displaying news about the president (b) on Rudaki Avenue, the independence monument displaying Tajikistan's history (c), the tea house Rohat (d).

imported from Kazakhstan costs about € 2.20. Quite a price in a country where the average salary amounts to roughly 2300 Somoni (i.e., roughly € 200; CEIC, 2024)! It made me think.

The rest of the week was quite enjoyable. Usually, I spent the day with the HWI colleagues in the office, post-processing the data of the field mission and drawing the map for the GI registration process for the Ashtak Dried Apricot (Fig. 12). Curiously, the Ashtak plantation area is limited to the gently inclined slope above the main road and to the shape of a fan approximately corresponding to the channel of Shaydon. Farmers reported in our interviews that not only the drying time was shorter compared to apricot sorts growing further downslope between the road towards the Syr Darya and the salt pan (cf. Solonchak Aksikon in Fig. 12), but also the taste is considerably different. One suspicion for my part could be an influx of specific minerals through the channel into the plantation fan. As it happens, the channel catchment includes a geologic unit of conspicuous red rock (cf. northwestern corner in Fig. 12), presumably containing iron as its stone fragments are surprisingly heavy. The stream passes right through this unit at the catchment outlet, before discharging with seasonal intensities onto the fan below. Perhaps another field mission including geologic sampling could solve the mystery!

In the early evenings, I had time to visit the city, which definitely can compete with any other capital; I found a Kärcher Shop, the Segafredo Zanetti Café, and fortunately, the Rohat Choikhona dating from 1958 (Fig. 11d), one of Tajikistan's oldest and most famous tea houses for which petitions were held to prevent its destruction (eurasianet, 2022).

And finally, how could it be different? The last office day we had a little cooking party. The head of HWI himself took action and prepared a feast: tender meat with $\frac{1}{4}$ kg of butter (instead of oil) – and a toast on our mission of this year. Apricots for dessert! Hopefully, next year we will map apples in Kazakhstan or honey in Kyrgyzstan.

The aftermath

With certainty, the trip was one of the most unusual business trips in my career, but also one of the most exciting, impressive, and instructive. Maybe even one that led to new dynamics faster than after other trips.

On the 22nd of November, we held a kick-off meeting for cooperation on landslide susceptibility and early-warning between GeoZS, the MES of the Kyrgyz Republic, and WFP as agreed during the business dinner with the handshake with Ruslan. As if mutual interest and six dedicated presentations were not yet enough, GeoZS was asked if members of the Kyrgyz Ministry could visit in the

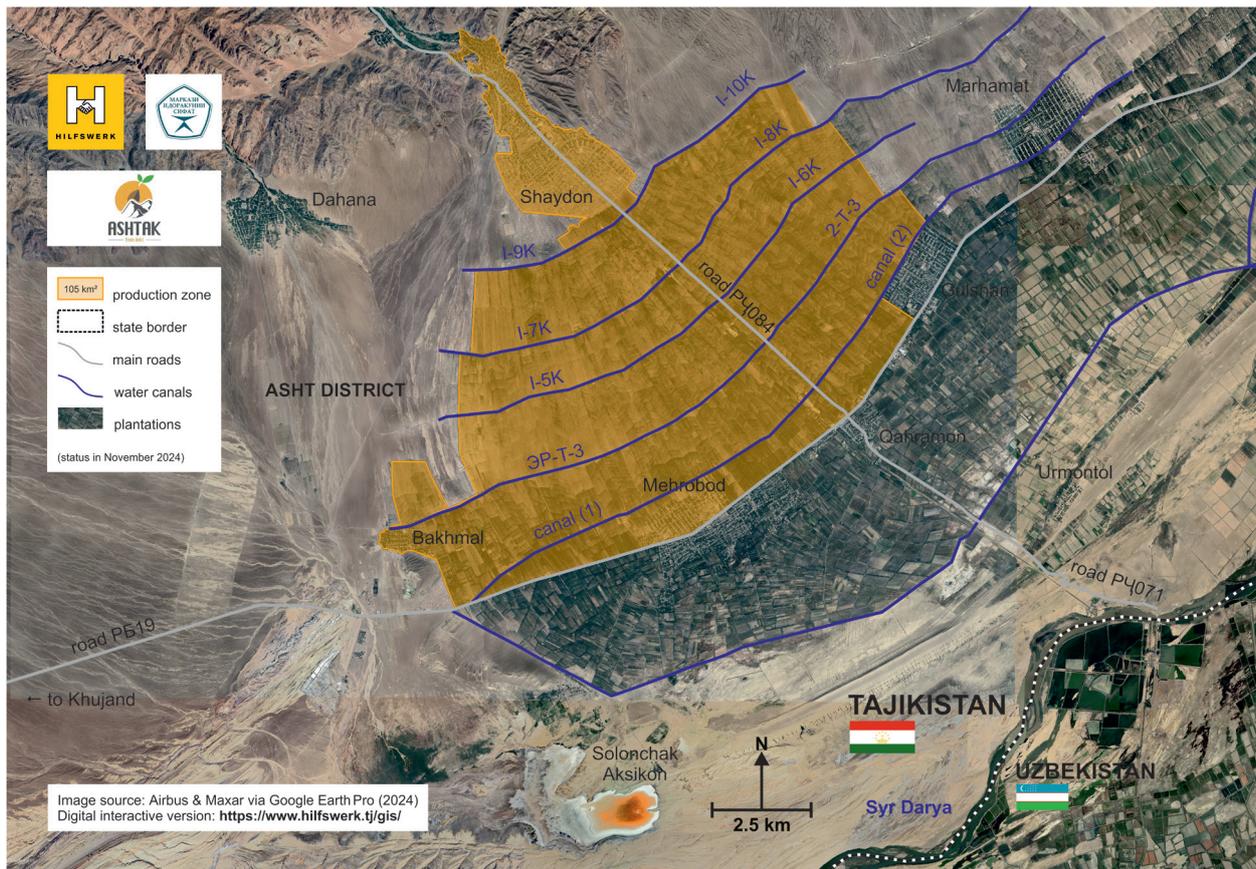


Fig. 12. Plantations of Ashtak (by courtesy of Hilfswerk International (HWI)).

framework of a study tour and members of the GeoZS were invited to join a conference on landslide monitoring in February 2025 in Bishkek.

Myself, I held a seminar on JavaScript coding in the Google Earth Engine on the 28th of November in a hybrid format for GeoZS and Vilnius University in Lithuania. After discovering the interest of the audience during the conference in Bishkek, I decided to design a 4-hour seminar including practical exercises, that can help colleagues not specialized in GIS and remote sensing to acquire satellite data in a relatively simple way. The seminar could later be held for other audiences in Slovenia or abroad.

Likewise, HWI (i.e., the headquarters in Austria and the representative office in Tajikistan) emphasized their interest in future cooperation with GeoZS. Playing the role of project implemen-

tors and facilitators without thematic limitations, it is open to topics such as environment and climate change, livelihood preservation, and safety against natural hazards. In this context, HWI positively commented on the proposition of GeoZS to cooperate with the Kyrgyz Government on landslide susceptibility and early-warning, mentioning that the subject could be likewise applicable to Tajikistan with its mountainous areas covering more than 90 % of the country (FAO, 2012).

Acknowledgments

First, I would like to thank GeoZS for having closed an eye on me going on a mission only one month after having accepted my position, the flexibility of handling this exception, and the positivity towards future cooperation with Central Asia.



Fig. 13. A little lunch (a) and the last selfie before returning to Slovenia (b).

I also would like to mention the company and support of GFZ, particularly by Dr. Oliver Bens and Dr. Sigrid Roessner, and the fact that I could join the GFZ Team in all activities during the first week in Bishkek almost as if I belonged to GFZ myself.

Particularly, I thank the HWI Team (Fig. 13a-b): Umed Aslanov for the organization of the Uzbek-Tajik part of my trip, Shuhrat Qodirov for the excellent accommodation in Dushanbe and being my late-night taxi to the airport, Gulbarg Lalbekova for her kind support with administration, and Ravshan Hasanov for the field mission to Asht.

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