



ПАРКИ ГАНДУМИ ПОМИР

© PUBLIC ORGANIZATION "ECO CONSULTANCY"

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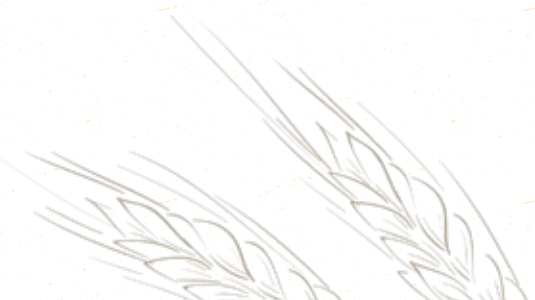
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BARTANG VALLEY: THE HOME OF THE OLDEST WHEAT VARIETIES

The Bartang Valley in Rushan District of the Gorno-Badakhshan Autonomous Region is perhaps one of the highest-altitude locations in the world where wheat is cultivated. The villages of this valley, situated at elevations ranging from 2,000 to nearly 3,200 meters above sea level, yield the desired harvest of wheat and other cereals annually in their fields, ensuring a steady supply of grain for the local rural communities.

Since ancient times, the inhabitants of Bartang have traditionally cultivated wheat, barley, beans, peas, and millet on their small plots of land. However, millet cultivation has significantly declined in recent years. Due to water shortages for irrigation, most of the land is cultivated primarily in the spring. Winter wheat is rarely cultivated in the valley.

According to statistical data from the Department of Agriculture of Rushon District, the arable land in the Bartang Valley, consisting of small mountainous plots, amount to a total of 436 hectares.

However, it is encouraging that in 2019-2020, the area of arable land in Bartang expanded by more than 60 hectares in Roshorv village, Upper Bartang with financial and technical support from the Aga Khan Foundation. Currently, wheat is being cultivated on most of these newly developed plots. The farmlands of Bartang, which were already limited before the Soviet era and further reduced after Tajikistan's independence, are remarkable for their resilience. Despite extreme heat and cold, they have managed to provide the valley's residents with food over the years.

Eyewitnesses recall that during the Tajik Civil War (1992-1997), the Bartang Valley had better grain supplies than any other valley in Badakhshan. According to experts, the secret lies in the fact that the people of this valley have been able to preserve local wheat seeds for many years.







THE EXPEDITION FOLLOWING ACADEMICIAN N.I.VAVILOV'S ROUTE IN THE PAMIR MOUNTAINS DECLARES BARTANG AS THE BEST HABITAT FOR WHEAT VARIETIES IN THE WORLD

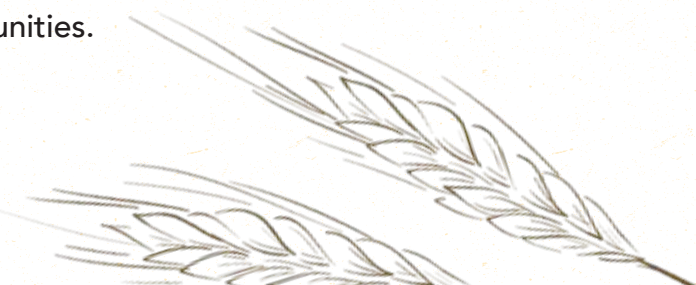
During 2016-2017, the Public Organization (PO) "Eco Consultancy", one of the most prominent environmental organizations in the country, conducted a field study in the Pamir region following the route of Academician N.I. Vavilov. This study was carried out with funding from the Christensen Fund.

The main objective of this project, in addition to conducting expedition research, ethnographic studies, and interviews with scholars and traditional knowledge holders, was to establish a direct connection between plants and human cultures in the highlands of the Pamirs, which was once first recognized by Academician N.I. Vavilov. The significant role of wild genetic diversity in advancing crop improvement and enhancing resilience to climate change and diseases was identified and thoroughly examined within the framework of the project.

It was established that the preservation of biological diversity is closely linked to cultural forces and the traditional knowledge of local communities.

Through this project, a new area of research emerged at the intersection of humanities and biological sciences, enabling a detailed study and documentation of the connection between genetic resource diversity and human cultural traditions.

Cultural forces serve as the fundamental drivers in the management and transmission of traditional knowledge. Therefore, the preservation of genetic resource diversity is inherently dependent on them. Through the implementation of the "Mobile Training " along N.I. Vavilov's route, the project successfully brought together multidisciplinary scholars, including experts in biological, ecological, and humanitarian sciences from research institutes and universities, as well as students, community representatives, and activists from public organizations.





Participants had the opportunity to exchange knowledge and experiences, shaping a shared vision of bio-cultural perspectives. The six-day training covered a wide range of interactive activities and in-depth discussions, providing participants with extensive insights into the preservation of biological diversity and genetic resources. Additionally, it highlighted the cultural diversity of community-based ecological practices, which were collectively explored and analyzed by all attendees.

The mobile training process was presented in the form of a documentary film at the national conference dedicated to the 130th anniversary of the birth and the 100th anniversary of the first expedition of Academician N.I. Vavilov to the Pamirs. The film was showcased under the theme: "The Role of N.I. Vavilov in Understanding and Studying the Biological Diversity of the Pamir Mountains and Its Connection to Human Cultural Diversity." Based on the findings of the expedition, a national conference was organized in collaboration with research institutes. The conference focused on the role of indigenous farmers and collaboration with communities in the sustainable management of traditional agricultural seed varieties. Discussions also addressed the further study of certain crops in the context of climate change and the increasing spread of plant diseases.







WHEAT PARK OR PAMIR WHEAT

Since June 2018, the PO "Eco Consultancy"; has been actively working to preserve food security, promote biodiversity, and protect the unique biological and genetic resources of the Pamirs. Through collaborative research with scientists and local communities, the organization initiated the establishment of a biological heritage repository in Bartang valley, leading to the creation of the "Pamir Wheat Park."

To implement this idea, "Eco Consultancy" established seed banks in four high-altitude villages of Bartang Valley. To preserve local wheat varieties, the community constructed iron storage houses and traditional straw-grain silos.

In October 2019, to further develop and promote the "Pamir Wheat Park" initiative, the PO "Eco Consultancy" launched an experimental food and agricultural genetics research center in Bartang valley. Agricultural and biological scientists participated at the conclusion of this initiative and once again studied various wheat cultivation methods, including local wheat varieties and their long-term preservation techniques.







БОНКИ ТУХМИИ ДЕХАИ
ҒУДАРА

COMMUNITY SEED BANK OF
GUDARA VILLAGE

БО ДАСТГИРИИ ТАШКИЛОТИ ЧАМЪИЯТИН "МАШВАРАТИ ЭКОЛОГИ"
ВА МАБЛАГГУЗОРИИ ФОНДИ КРИСТЕНСЕН (ТСФ) БУНЁД ГАРДИДААСТ.



EXCHANGE VISIT AT THE N.I. VAVILOV GENETIC FUND IN SAINT- PETERSBURG

Before initiating the seed bank project in the Bartang Valley, project leaders Askarsho Zevvarshoev and Yodgorsho Qonunov conducted a working visit to the Federal Research Center of the N.I. Vavilov Institute of Plant Genetic Resources in St. Petersburg. During their visit, they explored the institute's extensive wheat genetic fund, which is one of the main research divisions of the institute. This repository is among the largest global seed preservation banks, safeguarding genetic resources of various plant species from different regions, and remains highly relevant today.

The project leaders examined the seed bank's collection, studied preservation techniques, and consulted with scientists and experts in the field, addressing their questions regarding advanced methodologies.









OBJECTIVES OF ESTABLISHING A SEED BANK FOR PAMIR WHEAT PARK

Small storage facilities have been opened primarily to create a fund or reserve for preserving local seeds that are resilient to climate change.

Other objectives include managing grain reserves, stabilizing the domestic grain market, implementing government policies on eco-friendly nutritious food, ensuring biological and physical security for citizens, and preserving high-quality local seeds for the long term.









CONDITIONS FOR ESTABLISHING A SEED BANK

The project leaders from the PO “Eco Consultancy” emphasize that for the long-term preservation of wheat, it is essential to first consider local conditions.

The storage facility must always be dry, located away from groundwater, and structurally strong.

The walls, doors, ceiling, and floor should be free of cracks, all openings must be sealed, and the walls and floors should always be even. Dust must never enter the storage area, and it should remain free from external odors at all times.

Before storing the grain, the facility must be disinfected, dried, and well-ventilated. Entering storage with dirty footwear is strictly prohibited. Additionally, the storage should not be too far from residential areas to ensure easy access.

The quality of the seeds intended for long-term storage must be exceptionally high. The facility must always be protected from insects, rodents, and birds and should be safeguarded against wind and rain to ensure the preservation of the stored seeds.







WHEAT SHELF LIFE AND PRESERVATION

Wheat retains its biological and physiological properties for a certain period. Scientists refer to this as longevity, and the longevity of grains is categorized into three types: biological longevity, agricultural (economic) longevity, and technological longevity. Biological longevity lasts for more than 30 years. Agricultural (economic) longevity ranges from 5 to 10 years.

If wheat grains are fully matured, properly dried, and stored under stable conditions, they can be preserved for more than 10 years.

The biological lifespan of grains lasts as long as they retain their ability to germinate.

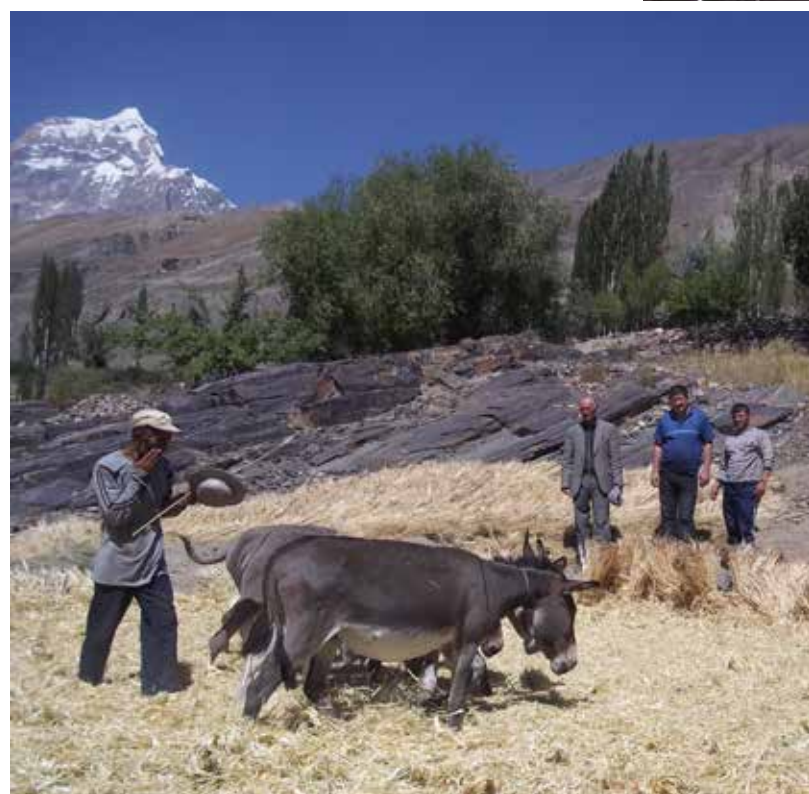
The agricultural (economic) lifespan lasts as long as the quality of the grains meets required standards, and they retain their usability for consumption and agricultural purposes.

The technological longevity refers to the preservation of the nutritional properties of wheat and its suitability for livestock feed or other technical needs.











THE ESTABLISHMENT OF A WHEAT SEED BANK IN THE BARTANG VALLEY HAS GREAT SCIENTIFIC SIGNIFICANCE

says corresponding member of the National Academy of Sciences of Tajikistan, Doctor of Agricultural Sciences, Professor, and Head of the Laboratory of Genetics and Plant Breeding at the Pamir Biological Institute, Qozimahmad Abdulamonov.

According to this scientist, who is one of the leading wheat specialists in the country: "the establishment of a wheat seed bank in the Bartang Valley by the PO "Eco Consultancy" is a completely wise and timely initiative that has a strong scientific foundation."

Qozimahmad Abdulamonov is a scholar who has dedicated almost his entire life to studying wheat cultivation in the Pamirs. This renowned researcher has actively participated in various expeditions aimed at studying the condition of wheat and grain crops in the mountainous regions of our country, the Badakhshan province of Afghanistan, particularly in Ishkoshim and Wakhan of Tajikistan, as well as in the Bartang Valley and Shohdara.

Through his research, he has discovered numerous varieties of wheat, grain crops, and legumes.

For many years, he has served as the head of the Dasht-i-Silmon breeding station in Ishkoshim District, conducting numerous experiments to cultivate high-quality local wheat seeds.

Academician Abdulamonov states, "The villages of Roshorv, Ghudara, and Ravmed in the Bartang region of the Pamirs are among the highest-altitude villages where wheat is cultivated. In these villages, wheat fields not only produce good yields, but the quality of the wheat grains is also exceptional, with high nutritional value."

According to the wheat scientist, the initiative of "Eco Consultancy" will ensure the long-term preservation of the rarest local wheat seeds—surkhak and safedak—while also facilitating their distribution to other mountainous regions of the Pamirs.









SAFEDAK, RUSHTAK (SURKHAK), MUQAK, JALDAK, SPIYAK, SIYAHLOS...

According to the information provided by the experienced farmers of Bartang, the following types of wheat are currently cultivated in the valley's fields: safedak, rushtak (surkhak), muqak, jaldak, siyahlos... The first two varieties are common in all villages of Bartang, while muqak, jaldak, spiyak, and siyahlos are not yet found in every village.









VILLAGES WHERE SEED BANKS OR SEED STORAGE FACILITIES HAVE BEEN ESTAB-

Roshov – 3,180 meters above sea level;
Ghudara – 3,100 meters.
Chadud – 2,100 meters.
Ravmed – 2,980 meters.









STATISTICAL INFORMATION ON THE POPULATION, LAND, ORCHARD, AND PASTURES OF BARTANG VALLEY

No	Name of the Rural Community (Jamoat)	Households (number)	Population (people)	Arable Land (ha)	Homestead Land (ha)	State Reserve Land (ha)	Orchard (ha)	Pasture (ha)
1	Savnob Villages: Savnob, Barchadev, Kudara, Nisur, Pasor, Bopasor, Roshorv, Rukhch, Yapshorv, Varjas, Viranjavn	652	3273	298	29	75	6	4843
2	Basid Villages: Basid, Bardara, Chadud, Ajirikh, Devlokh, Dorzh, Zarjif	377	1538	48	8	10	4	59
3	Bartang Villages: Siponj, Visav, Darzhomch, Dasht, Ravmed, Razuch, Pitob, Khijez, Ravivd	509	2333	90	14	16	3	2128
	TOTAL	1538	7144	436	51	101	13	







PAMIR WHEAT AND ACADEMICIAN N.I.VAVILOV

The renowned Russian geneticist and plant breeder, Academician Nikolai Ivanovich Vavilov, who, despite his short but highly productive life, was primarily engaged in the collection of grain crops, conducted extensive research on various types of wheat and barley from Iran to the Pamirs.

During his visit to the Pamirs (his first expedition took place in 1916), he concluded that high-altitude regions like the Pamir Mountains serve as "isolators" for preserving crops and are natural breeding grounds for cultivated plants. Vavilov referred to the Pamirs as an ancient center of cultivated agriculture

Here, we present a summary of an article by the Russian scientist, Dr. Mikhail Fedorovich Grigoriev, a senior researcher at the Federal Horticultural Center for Breeding, Agrotechnology and Nursery of the Russian Academy of Agricultural Sciences. Dr. Grigoriev considers himself a disciple of Vavilov and has spent many years working in the Pamirs, where he conducted significant scientific research on Pamir wheat.









ARTICLE TITLE: "FOLLOWING THE ROUTE OF N.I. VAVILOV'S FIRST SCIENTIFIC EXPEDITION TO THE PAMIRS 45 YEARS LATER"

N.I. Vavilov was aware that the Pamirs represent a high-altitude plateau, from which some of the highest mountain ranges of Asia extend in different directions, including the Tian Shan, Hindu Kush, Kunlun, Karakoram, and the Himalayas. It was also known that in the foothills of the Pamirs, along the banks of the Panj River and its tributaries—the Vanj, Bartang, Gunt, and Shah-Dara rivers—settled Aryan agricultural communities had lived for centuries. Vavilov planned to study their culture during his expedition.

The route of his journey through the Pamirs included the following high-altitude locations: Kalaikhum (1,100 m), Khorog (2,100 m), the Gunt Valley up to the Duzukh-Dara gorge (3,100 m), crossing the Shughnan range to the upper Shah-Dara Valley, Dzhau-Shangoz (3,400 m), returning through the Shah-Dara Valley to Khorog and then back to Kalai-Khumb.

Due to delays while crossing into the Karategin region, Vavilov was unable to visit the Vanj, Yazgulom, and Bartang river valleys. However, he conducted a detailed study of the main traditional agricultural regions of the Pamirs—Darvaz, Rushan, and Shughnan.

The primary goal of Vavilov's Pamir expedition was to collect early-maturing crop varieties that could be cultivated in the northern regions of Russia. However, the results of the expedition were even more significant.

Vavilov documented 33 cultivated agricultural crops grown in these regions, including field crops, vegetables, industrial crops, spices, medicinal plants and fruit-bearing crops. Additionally, he determined the altitude limits for cultivating these crops, their vertical zonation, and their frequency of occurrence across different ecological zones.

The scientist also compiled an ethnographic description of the Pamiri farming communities, detailing their appearance, customs, food preparation methods, agricultural tools, and farming techniques.

Special attention during the study of the Pamir regions was given to the species, variety, and cultivar diversity of cultivated crops, particularly wheat, as well as barley and rye.

N.I. Vavilov noted that despite the relatively small number of Pamir wheat samples collected (700), their diversity was exceptionally high.

Of particular interest were the newly discovered liguleless wheats and wheats with an inflatum-type spike. Their presence in the Pamirs, along with a large number of other varieties, fundamentally altered the classification of soft wheats of the species *Triticum aestivum* L.

In Shughnan (Porshnev village), Vavilov met a local wheat breeder, Abdullo Nazarov, who specialized in selecting early maturing wheat varieties. The varieties he developed matured 20 days earlier than the original ones. N.I. Vavilov also managed to identify a number of wheat forms that exhibited high levels of early maturation. Analyzing his findings, N.I. Vavilov concluded that the Pamirs, which had been inhabited by farmers for thousands of years, were not a primary but a secondary center of wheat origin. The great diversity of wheat varieties in the region was largely influenced by the complex mountainous terrain, harsh high-altitude environment and the isolation of farmers in different mountain areas.

Despite his extensive research in various fields, N.I. Vavilov never forgot about the Pamirs. On his initiative, in 1940, at an altitude of 2,360 meters, the highest-altitude botanical garden in the Soviet Union—the Pamir Botanical Garden—was established. Its purpose was to study and utilize the region's unique and rich flora for national agricultural needs.

N.I. Vavilov also sent a large scientific library to the botanical garden, which provided valuable resources for researchers. Over the years of field studies, around 1,500 wheat samples were collected, differing in species and variety characteristics. Among them were large groups of ligulate and endemic liguleless forms, awned and semi-awned, awnless, square-headed wheats, and inflatum-type spike wheats.

The discovered varieties fit well into N.I. Vavilov's theory of homologous series in hereditary variability, which he had previously developed. This biological "Mendeleev's Table" suggested the existence of yet undiscovered wheat forms, prompting continued research. Therefore, the search continued, resulting in the discovery of new, previously unregistered varieties belonging to the species *Triticum aestivum* L. and *T. compactum* Host.

Based on the collected material, a map of the distribution of various types of Pamir wheat was created, which revealed a clear geographical pattern in the localization of different wheat groups in the studied region.



Parallel to the route surveys, three research stations were established at different altitudes to study the biological, agricultural, physiological, and immunological properties of wheat.

The research found that, Pamir wheat was represented by two species—soft wheat (*Triticum aestivum* L.) and dwarf wheat (*T. compactum* Host.). Soft wheat had a wider and more universal distribution, whereas dwarf wheat was localized in small clusters in three areas in the valleys of the Bartang, Panj, and Shah-Dara rivers at an altitude of 2,700–2,800 m.

The wheat fields represented complex populations consisting of 5–20 varieties. The greatest diversity in botanical composition was observed at an altitude of 1,900–2,200 m in the regions of Khorog, Rushan, and the lower reaches of the Bartang river. The most uniform wheat fields were in the high-altitude zone—ranging from 2,800 to 3,200 m.

A total of 61 varieties were identified, of which 52 belonged to soft wheat and 9 to dwarf wheat.

Within both species, up to 25–30% of the wheat was represented by liguleless (endemic) forms, and up to 40% by the inflatum-type spike.

During the study of wheat under field trial conditions, significant differences in the duration of the vegetative period were identified. Winter forms had a vegetative period of up to 312 days, semi-winter forms from 280 to 290 days. Among spring wheat varieties, the differences in ripening periods ranged from 20 to 25 days. As a result, the earliest maturing forms, Bobilo (var. horogi) and Jaldak (var. gunti), were identified, which at an altitude of 3,000 m ripened on the 70th–75th day.

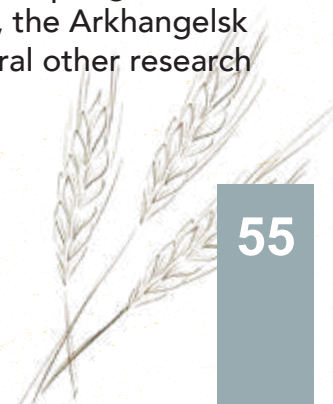
Some productivity traits of Pamir wheat were of great interest for breeding. The grain of all wheat varieties was characterized by high test weight, large 1,000 grains, as well as good grain filling and uniformity. At harvest, the wheat showed minimal shattering and had low soil fertility requirements.

However, some undesirable traits were observed in wheat, including pre-harvest sprouting of white-grained varieties, low resistance to lodging, and poor milling and baking quality for yeast bread production.

...The topic of my PhD dissertation was " Pamir Wheat as a Genetic Resource for Plant Breeding." The samples studied and the information on their qualities were transferred to the wheat gene pool collection of the N. I. Vavilov All-Russian Institute of Plant Genetic Resources (VIR). Due to their unique properties, Pamir wheat varieties became in high demand among breeders, with requests coming from many breeding and experimental stations.

In a letter from breeder V.M. Pylnyev, received from the All-Union Breeding and Genetics Institute (Odessa), it was written: "Among all the initial material, Pamir wheat varieties exhibit the best combinatorial ability in crossbreeding and have been included in a large number of hybrid combinations."

Similar information about the use of Pamir wheat in breeding processes was received from the Siberian Institute of Spring Wheat Breeding, the Krasnovodopad Breeding Station, the Arkhangelsk Station, the Shatilov Breeding Station, and several other research institutions.





QUOTES FROM ACADEMICIAN VAVILOV ABOUT THE PAMIRS

"...As an agronomist, I was particularly interested in the Western Pre-Pamir region, also known as Mountainous Badakhshan..."
(N. I. Vavilov)

"Liguleless forms of soft wheat, based on our findings, are exclusively endemic to the regions of Badakhshan, Chitral, and the adjacent mountainous areas of Bukhara."
(N. I. Vavilov)

"Distinct liguleless forms of rye, soft wheat, and dwarf wheat have been found exclusively in the Pamirs."
(N. I. Vavilov)

"Among this weedy rye (in Shughnan and Rushan in the Pamirs), an exceptional diversity was identified, which is completely unknown to European farmers."
(N. I. Vavilov)

"In the mountainous regions of the Pre-Pamir and on the islands of the Mediterranean Sea, unique recessive forms of wheat and rye with simplified leaves (liguleless) have been discovered."
(N. I. Vavilov)

"Nowhere else in the world is there such a wealth of genetic diversity in grain legumes as in the mountainous regions of Tajikistan and the adjacent southern areas of Afghanistan and northwestern India."
(N. I. Vavilov)

"The main reserves of varieties were found to be concentrated in mountainous and often high-altitude southern regions."
(N. I. Vavilov)

"...When entering any country, I wanted to accomplish so much—to understand the 'agricultural soul' of that country, its conditions, to study its species and varietal composition, to take the most valuable aspects from it, and to connect the data of that country into a unified whole with the evolution of global agriculture and plant cultivation..."
(N. I. Vavilov)









HISTORY OF WHEAT

Wheat (*Triticum* in Latin) is an annual grass species of the cereal family and is considered one of the oldest and most widely cultivated crops in the world. For centuries, before humans discovered and utilized other food plants, wheat was the primary source of sustenance. Bread, one of the earliest forms of human food, is made primarily from wheat, with its history dating back to the late Stone Age. Early humans initially mixed grains with water, later learning how to knead dough.

Ancient people first used wheat as a wild-growing plant. Initially, they consumed the grains raw, but later, they began to grind them with stones into flour, preparing semi-cooked meals. They also learned how to separate grains from chaff before consumption.

Wheat fundamentally transformed the lifestyle of early humans, marking the transition from hunting and gathering to agriculture, a transformation known as the Neolithic Revolution.

Ancient farmers processed cereal grains by drying, milling, and boiling them over low heat and baked flatbreads.

Scientists estimate that wheat was first cultivated between 12,000 - and 17,000-years BCE in the Near East, before spreading to Asia. Most researchers believe that the original homeland of wheat (*Triticum monococcum*, *Triticum monolocum*, and *Triticum tritcale*) was Syria and Palestine. From there, it spread to Egypt and Mesopotamia, then to Iran, and through Iran to India, Turkestan, China, Russia, and eventually Europe, before reaching other parts of the world. However, many scientists, including the Russian academician N.I. Vavilov, considered the Pamir region to be one of the primary centers of wheat diversity.

Over the centuries, different cereal varieties were cultivated through traditional selection methods. This may explain why wheat has developed high resilience to extreme cold and drastic climatic changes, allowing it to adapt to various environmental conditions.









NUTRITIONAL VALUE OF WHEAT

Wheat is a staple food for humans and can be consumed directly without additional components. It serves as a primary source of carbohydrates in the human diet. In terms of quality and nutritional value, no other cereal matches wheat flour. The digestion of wheat starch is easy due to its high protein content. Wheat is also rich in folic acid, while its gluten, protein, and fat content in the grain fibers contribute to its high energy value. Additionally, wheat contains starch, sugars, cellulose, fats, minerals, and essential vitamins such as B1, B, B2, B6, beta-methan, and vitamin E, making it one of the most nutritionally superior grains cultivated globally. Even wheatgrass is rich in minerals, vitamins, and lipids, while wheat straw contains a significant amount of protein and vitamins A, C, E, and B-complex.

Flour made from wheat grains is primarily used for bread production, which supplies approximately 60–70% of a person's daily energy intake. Wheat flour possesses unique physical and chemical properties. The gluten content in wheat flour, when mixed with water and other ingredients to form dough, undergoes fermentation, allowing it to be used in the production of various types of bread, biscuits, pastries, and other baked goods.

Researchers suggest that wheat-based products help reduce the risk of certain cancers, particularly stomach and colorectal cancer.









STRUCTURE OF WHEAT

Wheat is classified as an annual cereal crop, belonging to the Gramineae family and the Triticum genus. It has a slender, elongated stem and non-productive leaves. Like other plants, wheat consists of roots, stems, leaves, flowers, and seeds. The structure and appearance of wheat grains vary widely. Wheat differs in terms of height, stem thickness, grain color, grain size, and internal chemical composition. This plant consists of three main structural components: the endosperm, the bran (seed coat), and the germ (embryo).

The wheat plant grows to a height of 30–150 cm. It has an upright stem, leaves measuring 3–15 (up to 20) mm, and a fibrous root system.

Wheat is sensitive to excessive rainfall. It includes numerous wild and domesticated varieties. Wild wheat species often act as competitive weeds, disrupting cultivated wheat growth and yield.









TYPES OF WHEAT

Wheat is the leading cereal crop in many countries. It is sown in both spring and autumn, ensuring a continuous supply of wheat-based food throughout the year. Wheat is categorized into two main types: spring wheat and winter wheat. The grains of these two types of wheat differ significantly in color, composition, and shape.

Spring wheat is sown in early spring. After germination, the young plant grows during spring and early summer, with harvest occurring by late summer. This type of wheat is typically cultivated in regions where winter wheat cannot survive extreme winter cold. The yield of winter wheat is higher than that of spring wheat; however, bread made from winter wheat is of lower quality. Spring wheat is usually sown after seedbed preparation, once soil temperatures rise above freezing. It is drought-resistant and well-adapted to dry conditions.

Winter wheat cannot be sown in spring, nor can spring wheat be sown in autumn, as they will not produce a good yield if planted in the wrong season.

In lowland areas, wheat is generally grown without irrigation. In hilly and sloped foothill regions, rainfed (dryland) wheat is commonly cultivated.

Wheat is classified into two main categories based on grain hardness: soft wheat and hard wheat.

Several environmental factors influence wheat productivity, including precipitation levels, relative humidity, air temperature, and soil conditions. The optimal climate conditions for wheat cultivation are cool temperatures during vegetative growth, moderate climate during grain formation, and warm and dry conditions during harvest.

For plant breeding science, approximately 30 wheat grain species have been identified to date, which are cultivated across the regions of Eurasia, Africa, the Americas, and Australia.











ECONOMIC IMPORTANCE OF WHEAT

Wheat is one of the first crops domesticated by humans. It is a highly adaptable cereal that can thrive in diverse regions, climates, and environmental conditions, including cold and temperate zones, arid and hot areas, and high-altitude terrains. Compared to many other crops, wheat is relatively easy to cultivate and is grown on large-scale agricultural lands, consistently providing sufficient yields.

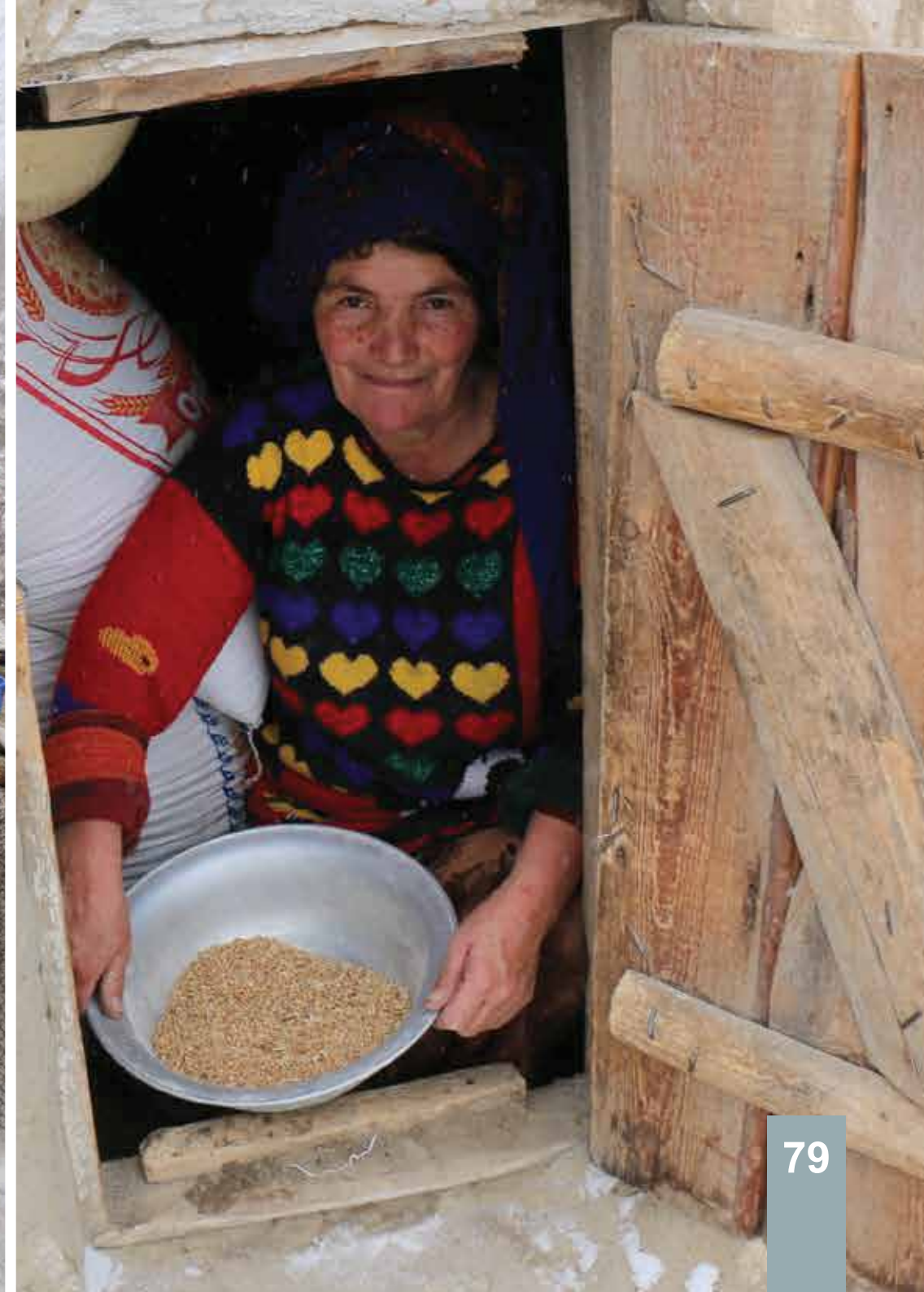
Wheat is particularly suitable for regions where the cultivation of other crops is challenging due to climatic variability or dry conditions. This cereal crop has the advantage of being stored for extended periods and transported over long distances without significant deterioration.

Unlike other cereals, wheat is the primary raw material for producing bread, biscuits, confectionery, cakes, spaghetti, and pasta. It serves as a food source not only for humans but serves as food for birds, livestock. Wheat straw and bran are highly valuable as livestock feed, while various wheat by-products are used in industrial applications, including paper production, adhesives, detergents, brewing (beer production), and distillation for alcoholic beverages such as whiskey and vodka.

In many countries, wheat is considered a strategic commodity. In the context of emerging global risks, such as pandemics, ensuring food security has become a critical priority, even for nations that are self-sufficient in grain production. In the era of emerging risks such as pandemics, ensuring food security has become highly relevant, even for countries that are fully self-sufficient in grain production, making wheat cultivation and storage a critical priority.

Due to population growth and rising wheat prices in the international market, achieving self-sufficiency in this strategic commodity is becoming increasingly important.







WHITE AND BLACK BREAD

For many years, wealthy people consumed white bread, while the poorer class used black bread. In ancient times, white bread was considered high-quality, making it more expensive. As a result, only the wealthy could afford it.

However, in the 20th century, this perception changed. Scientific research has shown that black bread is more beneficial and has higher nutritional value. Today, in developed countries, white bread is consumed less frequently.

WHEAT CULTIVATION IN BARTANG

The cultivation of cereal crops in the Bartang Valley usually takes place after Nowruz. Sowing typically begins on April 4. Farmers in the valley state that cereals in this region ripen within 5 to 5.5 months.

SEEDS

Every year, farmers set aside the best grains for seeds. According to tradition, seeds should not be used as food. Elderly people recount that even in the most difficult years, when people suffered from famine, no one would touch the reserved seeds. In the culture of mountain dwellers, using seeds as everyday food is considered a sin.

Before planting, women in the household usually clean the seeds by removing foreign plant seeds, stones, soil, and other impurities.

BIRD SCARING

The residents of Bartang believe that the red and black birds (touroughdzak) carry wheat diseases and cause damage to the crop. Every year, when the wheat stalks reach full height, flocks of these birds attack the fields. At this time of the day, the noise from various tools used to scare away the birds can be heard across the farmland. Bird scarers, from morning to evening, constantly shout and make loud noises to drive away the birds from the agricultural fields. They use different methods, such as slingshots (wizdoy), clanking metal objects, and spinning rattles made of iron. In some places, they set up scare-crows around the fields to deter the birds.

Many female farmers take a daf (traditional drum) and walk around the fields, playing it from morning until evening to keep sparrows away from the crops.







HARVESTING

In mid-August, the harvest of leguminous crops begins in the villages of Bartang, followed by the wheat harvest later in the month. The harvesting process is carried out manually using a traditional sickle. These sickles are made by local blacksmiths, who are present in almost every village. After being harvested, the wheat is bundled into sheaves. These sheaves are left on the field for several days to dry. Subsequently, they are gathered in stacks of 10 to 15 in a designated area (vurkh). Once the wheat is fully dried, farmers transport the bundles on their backs to the threshing site.

THRESHING FLOOR

In Bartang, a threshing floor is built near every piece of farmland. To prevent wheat from scattering, the area around it is fenced with wooden planks.

First, leguminous crops are threshed. Then, it is the turn of the wheat. The wheat sheaves are spread onto the threshing floor and trampled by livestock (gun).

Depending on the available resources in each village, threshing is carried out using animal hooves, by beating with flails, or with simple mechanical devices like threshing machines. After the threshing process, farmers use the wind to separate the chaff from the grain.

WINNOWING

When farmers have finished threshing all types of crops and the harvest is fully gathered, the winnowing (serzekht) process begins. Information about the customs and traditional methods of cleaning the threshing floor can be found on separate pages.

What we mean here is that after cleaning the threshing floor, two main products remain: the cereal grains and the straw. The residents of Bartang have designated storage areas or special places for each of these.

BARATANG GRANARIES (stockpile)

Since ancient times, the people of Bartang have built special granaries to store their grains, which they call "juv". These types of granaries are still widely found in the villages of the valley.

The granaries are not very large and are usually constructed on elevated ground with a sloped roof. These structures are built partially underground, making them resistant to environmental elements. Their underground positioning helps protect the stored grains from pests and ensures that the temperature inside remains cool.

The interior of the "juv" is divided into separate sections for storing grains, seeds, and dried fruits.







ANIMALS, TOOLS, AND EQUIPMENT USED FOR WHEAT PRODUCTION

- 1.Oxen
- 2.Donkeys
- 3.Yoke
- 4.Spade
- 5.Iron shovel
- 6.Wooden shovel
- 7.Sack
- 8.Tray
- 9.Bucket
- 10.Fine sieve
- 11.Coarse sieve
- 12.Stone
- 13.Tree Branch
- 14.Small wooden stick
- 15.Tool for collecting oxen and donkey manure











WHEAT – AN ELITE CROP

Wheat, as an elite and rare crop, was not a daily food source for everyone in ancient times. People used wheat flour only on special occasions such as holidays (Navruz, Ashura, Eid al-Adha, Ramadan, etc.).

In Bartang, there is a tradition known as "mēstmehmōnī" (welcoming the new moon), observed on the first day of the new month. On this day, it is customary to bake bread and other wheat-based foods.

BREAD – GARDHA

The primary food made from wheat in Bartang is, of course, wheat bread, which the Shughni/Rushani-speaking people call "gardha"

Besides bread, people use wheat flour to prepare various types of flatbreads, kumoch, bursok, and other sweet and savory baked food.

DHON

Dhon refers to roasted wheat grains or simply roasted wheat. Roasted wheat was mainly prepared in winter for children and those who went to the mountains for herding. In spring, before sowing seeds, it is not possible to prepare such roasted wheat.

DALYA

Crushed wheat was used to prepare porridge or cooked into a thick gruel (boj).

BOJ

The high-quality wheat is separated and cooked with freshly slaughtered lamb in a pot for a long time, resulting in a highly nutritious meal. Salt is added to this dish.

Such boj is also prepared using crushed wheat. The boj prepared from whole, unprocessed grains is called "zindaboj".

KOCHI

This dish is prepared from wheat flour with the addition of milk and butter and mainly intended for sick people, especially women who had recently given birth.

AKHIHZ

It is prepared using a mixture of wheat flour, sugar (in the past, with talqon and mulberries), and butter, resulting in a hard and delicious halva. Akhitz is usually prepared for the bride

HUVDKHUHPA

A porridge made solely from milk and wheat flour calls Huvd-khuhpa. It is specifically prepared for sick individuals.

HUVDASHAW

Bread is crumbled and soaked in warm milk and ghee.

RAHUCH

Approximately 200 grams of flour is mixed with water to make a thin dough. The pot is placed on the pan and heated. Two spoonfuls of the thin dough are poured into the pot. When one side turns golden brown, it is flipped to cook the other side until golden as well. This is similar to Russian blini, which are quickly prepared and taste delicious when eaten with cream.

BĀT

Halva made from red wheat flour and butter. It is cooked over low heat for a long time by continuously stirring until the flour and butter are completely blended together.

ZOGBĀT

In this bāt porridge, instead of ghee, animal fat (zogh) is added. The preparation method is similar to regular bāt.

NASRAK

Nasrak are animal-shaped figurines made in the Bartang Valley during the Bātayom festival.

Bātayom (bāt – buttery porridge, ayom – celebration, festival) is an ancient annual celebration observed by the people of Bartang from February 16 to 20. Along with cooking Bāt, which takes an entire night, people shape various animal figurines from dough (khokhchkhvalak). These figures represent halal animals, such as deer, sheep, yak, and camel. After shaping them, they are baked in the ashes left after cooking Bāt. These animal-shaped breads are called "Nasrak" (perhaps derived from the word "Nazrak", meaning offering or sacrifice). When these "animals" are baked, cooked Bāt is spread on their stomachs from both sides. Then, they are decorated with walnuts, seeds, and other sweets. Then, the Nasrak figurines are placed on the buchkuyij (wooden shelf) or omurza (a storage area in traditional houses where wooden planks were fixed along the walls). They are preserved for one month, until Shogun-Navruz (the arrival of Navruz). On Navruz, the Nasrak figurines are taken to the rooftop and distributed among the children. The children eat the sweets with joy and celebrate. Typically, each household prepares Nasrak according to the number of children in the family. Usually, two Nasrak figurines (a pair) are made for each person. They are prepared only from wheat bread.

RŪGHANHARVO

Flour is stirred into ghee, then boiling water is added. This creates a very nutritious porridge, which is primarily given to sick and weak individuals for strength and recovery.

REVICH

Revich is made by cooking wheat flour in ghee to create a thick porridge. Water is not added to the mixture.

This dish is considered one of the best remedies for diarrhea and stomach pain. Additionally, Revich is highly beneficial for restoring strength in mothers after childbirth.

QUMOCHTARID

Qumochtarid is made by breaking flatbread (qumoch) into pieces and mixing it with ghee, or cream, stirring it thoroughly. This results in a rich and delicious dish.

CHARVIGARDHA

Charvigardha is made by preparing dough similar to qumoch. Then, fat from meat is separated, chopped into small pieces, and placed inside the qumoch dough. The dough is then buried in warm embers (hamuch), covered with more hot ashes, and left to cook. After 30–40 minutes, it is fully baked. This type of qumoch is very flavorful and rich.



BĀTAYOM BĀT

One of the Navruz-related ceremonies in the Bartang Valley is Bātayom, which the locals traditionally celebrate annually on February 17–18. In the morning, all households announce "parchromch" (called "pichi romch" in Shughni). During this time, no one is allowed to visit each other's homes until sunrise. Women take carpets, rugs, pillows, and blankets outside and clean the floors, shelves, and ceilings of the house using brooms and dusters, a process referred to as "whitening" or deep cleaning. Everything is thoroughly cleaned, and furniture and household items are taken out of the house. When the house cleaning is completed, the furniture and household items are brought back inside. Then, the woman of the house decorates the doors, walls, pillars, and ceiling with two rows of floral patterns made from wheat flour. This is also called "bun zadan" or "safedi partoftan" (flour decorating or whitening). Patterns made from wheat flour appear on the walls and pillars. This symbolizes the coming New Year, good fortune, and abundance of bread. When the sun's rays appear, people begin congratulating each other. For the greeting ritual, the household selects someone to perform it. During parchiromch, no one from outside is allowed to enter the house. If, by chance, an outsider enters the house during this time, it is believed that the household may face a year of scarcity, their livelihood may decrease, and even misfortune could occur.

To break the parchiromch ritual, a chosen person is invited in advance.

When this chosen person arrives for the first greeting, they hold two wheat flatbread in their hands. Upon entering the house, they place the flatbread on the hearth (dzingak). Upon entering to offer greetings, they say "Shogun Bahor Mubarak" (Happy Spring). The hostess responds by saying, "Bo rūi shumo mubarak" (Blessed be your presence) and sprinkles wheat flour on the guest's right shoulder. A delicious meal is served to the guest. Thus, the "Salom-Salom" ritual begins, and villagers, relatives, and neighbors visit each other to offer congratulations, saying "Shogun Bahor Mubarak" (Happy Spring). When the Salom-Salom ritual comes to an end, the men of the village place a large 100-liter pot on the hearth in one of the houses. The bottom of the pot is sealed with clay (shipal) to prevent the flames from escaping. The ceiling above the pot is covered with a cloth to prevent dust and debris (chidir) from falling into the Bāt. Then, approximately 20–25 liters of water and 20–25 kilograms of flour are added to the pot. Firewood is prepared in advance. To stir and mix the Bāt, two wooden paddles and a small knife are made in advance from apricot wood. Two men (this task is not performed by women) slowly begin dissolving the flour using wooden paddles (fai). They continuously stir and turn the mixture in all directions without stopping.

The people of Bartang say that to prepare Bāt for Bātayom, only rushtakjindam wheat flour (red wheat) is suitable. Other types of wheat are not suitable for making Bāt for Bātayom. During the stirring and mixing process, flour and water are added as needed, depending on the consistency of the Bāt. The flour is dissolved and mixed for approximately one hour. When the flour is fully dissolved and mixed into the water, the fire is then lit underneath the pot. For the Bātayom firewood, only juniper wood is used. This is because juniper is considered a sacred tree and also produces very little smoke.

The stirring and mixing process continues. One person lifts the paddle, while the second cleans off the accumulated flour from it using small wooden knives. The substance that accumulates on the wooden paddle is called "ghast". The fire should not be too strong. It must burn slowly and steadily. The mixture inside the pot must cook slowly and gently. After approximately one and a half hours, small lumps begin to appear inside the Bāt. At this point, the firewood that hasn't fully burned should be removed from under the pot.

The Bāt is stirred continuously until the small lumps disappear. Fresh ice is brought from the water's edge and added to the Bāt, while the stirring continues.

After this, the fire is reignited. This process is repeated 2–3 times. When the lumps reappear, ice is added again, and the firewood is pulled back from under the pot. In Bartang, the lumps in Bāt are called "zhuray" (meaning small stones). According to people's observations, the more "zhuray" (lumps) appear, the sweeter the Bāt will become. The men take turns stirring the Bāt, and the mixing process continues for a long time, lasting a total of 12 to 14 hours.

Meanwhile, the other men in the house play the rubab, sing songs, and enjoy music and celebrations. The women prepare dough for Nasrak. The men shape the dough into small figurines or animal shapes. When steam rises from the Bāt, it takes on a brown or liver-colored hue. The men stir the wooden paddle deep into the Bāt. If the wooden paddle stands upright in the Bāt without falling, it indicates that the Bāt is fully cooked and ready. Bāt cannot be eaten while it's still hot. It is poured into plates and other containers to cool down before eating. In the morning, the Bāt is shared with relatives, neighbors, and those in need. Bāt is usually eaten with walnut oil. It is served in a bowl, where a hole is made in the center, and walnut oil is poured into it. Sometimes, milk is mixed with walnut oil before pouring it over the Bāt.



Bāt becomes very sweet and delicious. Even though no sugar is added, it naturally develops a sweet taste. This happens because wheat flour, which contains a high amount of starch, undergoes hydrolysis when it interacts with ice, breaking down into simpler sugars. After that, it converts into maltose, a type of natural sugar, which gives Bāt its naturally sweet taste.

Once the Bāt is ready, the wheat bread figurines are baked in the ashes of the Bāt. Then, the Nasrak figurines—dough sculptures of deer, sheep, goats, and camels—are baked in the hot ashes of the oven. After baking, they are coated with Bāt and decorated with apricot kernels and walnuts, giving them a festive and elegant appearance.

The third day after Bātayom is called Bātsalom. Anyone who has cooked Bāt at home places two Nasrak figurines inside the Bāt and visits relatives and neighbors to offer greetings.

Upon arrival, they state the purpose of their visit, and according to tradition, the host must try to fulfill their request. The visitor may ask for something, such as an object, an animal, livestock, or even request the host's daughter for marriage.

The host, when bidding farewell to the visitor, also gifts them two Nasrak figurines from their own collection.

In this way, people go from house to house throughout the day, exchanging Nasrak and Bāt, and by evening, they can return home with two Nasrak figurines and some Bāt.

Bātayom and Bātsalom are primarily celebrated in the villages of the Bartang community. Due to its sweetness and unique preparation, Bāt from Bātayom can be stored for a long time without spoiling. Traditionally, it is kept until the Navruz festival.

This very sweet Bāt is also distributed to children during the “chorshanbesuri” ceremony.

Another spring welcoming tradition in Bartang is the “chorshanbesuri” ceremony, which begins one week before Navruz. According to the traditions of the valley, people light a fire in front of their homes, or at a crossroads, and jump over the flames three times.

They also tear small threads or fabric pieces from their clothes and throw them into the fire, believing that this will remove all misfortunes and illnesses from their body and soul. On the morning of Navruz, people take Bāt along with a sheep or goat to the source of a water stream.

There, they sacrifice the animal by the stream's edge as an offering to nature, and they eat the meat along with Bāt. This ritual is believed to ensure abundant water in the new year. After this, the participants return to the village and gather at the house from which the oxen will be led for the first plowing of the year. The Khalifa (spiritual leader) then recites a prayer. Flour is sprinkled on the foreheads of the oxen, and they are fed kulcha (bread) and Bāt. Their horns are rubbed with oil, and then they begin the first plowing of the year. Leading the procession, local singers perform songs, and artists and dancers entertain the crowd.

Meanwhile, other villagers engage in traditional games, including Sanjakbozi (flag game), Goybozi (ball game), Vulchakbozi (spinning top game), and wrestling competitions.

(As narrated by Sarkori Davlatmamadov, 75 years old, a resident of the village of Siponj.)





USE OF WHEAT STRAW IN DAILY LIFE

Since ancient times, wheat straw has been used as nutritious fodder for large horned cattle after it has been softened and threshed on the threshing floor.

The people of Bartang also use it as a softening layer under rugs and carpets. This method helps keep carpets soft and well-preserved.

In the past, people even used the white stalks of wheat straw as fuel for cooking, as firewood was often scarce, especially during winter.

Additionally, skilled women use wheat straw to make hand-crafted items such as woven mats, baskets, and ropes.

WHEAT IN THE CULTURE OF BARTANG INHABITANTS

Wheat holds a special status in the daily life and traditions of the Bartang villagers and is considered a sacred plant.

According to local beliefs, wheat, flour, and wheat bread must not be thrown on the ground.

If someone finds a piece of bread on the road, they must pick it up, kiss it, touch it to their forehead, and place it on a wall so that sparrows can eat it.

Bread must not be broken with one hand.

If wheat bread is on the dining table, one must not stretch their legs out or lie down nearby.

Feeding wheat bread to animals and birds is forbidden.

This reflects the deep respect the Bartang people have for wheat and its role in their culture, spirituality, and daily life. Wasting wheat bread is not allowed. Kulcha (flatbread) and Bāt halva are made only with wheat bread. During the Navruz festival, after cleaning and house purification, the ceiling is decorated with wheat flour floral patterns. When people enter the house for the first time after cleaning, wheat flour is sprinkled on their right shoulder as a blessing. When a groom brings his bride home, wheat flour is sprinkled on their right shoulder as a sign of prosperity. When a bride leaves her family home, wheat grains are placed inside her new clothes and suitcase as a blessing for her new life. When a soldier returns home, wheat flour is sprinkled on his right shoulder as a sign of protection and good fortune. When building a new house, wheat grains are placed in the foundation before construction begins, symbolizing prosperity and stability.







THE FIRST PLOWING RITUAL (QULBABARORON)

The first plowing begins when, according to the people's belief, the sun enters its balance (Libra) in the sky.

The village elders gather and confirm to everyone that the sun has reached its proper position. To determine this, special markers exist in the mountains, hills, and inside traditional Pamiri houses, which help people observe the movement of the sun.

Before starting the first plowing, the village Khalifa is consulted to determine the auspicious hour.

At the appointed time oxen are brought into the house and their hooves and horns are rubbed with butter. In some villages, women bake a special bread in the shape of a cow's tongue. This bread is rubbed onto the oxen and then fed to them.

When the oxen are led out of the house, no one should cross their path. As they are taken outside, the farmer recites:

Happy New Nowruz to you!

May this honorable time be blessed for you!

Angels sing in the heights of the sky,

May this good fortune be blessed for you!

Then, as the first furrow (raaj) is plowed, the following prayer is recited:

"Work with wisdom, harvest with success, by the breath of Pir Shohnosir, blessings from the Prophet, grace from the Imam of the Time, health of body, peace of heart, by the command of Piri Shoh, Amen, Allahu Akbar!"

When the farmer's spade softens the first furrow, in some villages, people take soil under the oxen's hooves, rub it on their faces and bodies, and express gratitude to God and Nature.

PRAYER FOR THE FIRST SEED

When the first seeds are sown into the soil, the following prayer is recited:

"In the name of Allah, the Most Gracious, the Most Merciful, O Hazrat Bobo Dehqan!

From one seed, may a thousand grow,

From a thousand, countless more,

May there be little straw, but full granaries!"

Each village usually has a designated seed sower, as it is believed that the wheat harvest depends on the hands of the sower.

According to people's beliefs, there are two individuals who must never sow seeds: the corpse washer (mortician) and the blacksmith.

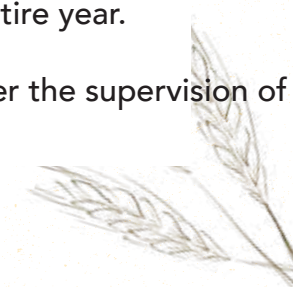
FIRST IRRIGATION WATER

When the crops ripen and it is time for watering (irrigation), in many Bartang villages, the opening of the first irrigation water is only permitted for specific individuals.

These individuals are descendants of those who historically had the right to perform this task in the village.

According to local beliefs, these people are considered "light-handed", and if they open the irrigation water, it will ensure a plentiful water supply for the entire year.

The first irrigation is also performed under the supervision of the village Khalifa.









THE FIRST HARVEST

When the crops ripen, people prepare for the harvest. The "auspicious" harvest must be carried out on a Wednesday. On this day, people cut one bundle of grain with the intention of receiving a bountiful harvest, then tie it and leave it in the field overnight. After this, the main harvest depends on weather conditions and the workforce available, and it is no longer tied to specific days of the week.

THRESHING FLOOR (HIRMAN - SOR)

When the threshing floor has been cleaned, and the chaff and debris are removed, the ceremony of burning the threshing floor (sorzekht) takes place. The threshing floor (sor) becomes completely free from external impurities, stones, and any other substances. As a symbol, cow manure is placed on top of the sor (a tool), and the threshing floor is cleaned by blowing the chaff from one side to the other. When the cow manure becomes visible from underneath, it indicates that the threshing floor has been completely cleaned. The threshing floor can be collected on any day except Wednesday.

The farmer first gathers the harvest well, then uses a wooden hoe (fai) to shape it, afterwards he sits in front of it from the direction of the qibla and with the following prayer fills the plate with grain:

"O God, bless this good deed, O Almighty God, make it blessed! Grant the longevity of Prophet Noah, the kingdom of Prophet Solomon! O God, from Your hidden treasures, grant a long life, a strong foundation, and an abundant livelihood. Give health to the body, purity to the heart, and let all be in accordance with the command of the Imam of the Time. Allahu Akbar!"

First, they place bread or a knife on top of the grain heap to protect it from the evil eye. A bucket of wheat is first brought into the house from the grain heap, which is called sorpukhta.

When the grain heap is placed into sacks, this prayer is recited: "O Hazrat Baboi Dehkon, grant us lawful sustenance!"

During the threshing process, if a passerby walks by, they say:

- Blessings!

The owner of the threshing floor responds:

- Blessings from God!

Sometimes, the threshing ceremony begins with a prayer and blessing recited by the village Khalifa. His prayer entitles him to receive a bucket of wheat from the farmer.

The grain from the threshing floor is usually measured using a special container that holds 4 kilograms. In this way, the farmer calculates how much the new harvest has yielded.

STORING (JOKUNI) WHEAT

According to local beliefs, storing wheat in the granary is only allowed on Friday.

Granaries are divided into sections, with seeds placed in one area, wheat for food in another, and legumes like chickpeas and mung beans stored separately.

FIRST FLOUR

When wheat from the new harvest is milled into flour, it must be taken directly home. According to tradition, this flour should not be shared with anyone, not even with the closest relatives or neighbors. It is believed that keeping the first flour ensures prosperity and abundance in the household.







WHEAT CAME FROM PARADISE

Bartang is a land of myths and legends. Many myths, tales, and stories exist about how the world was created by God. According to the people of Bartang, wheat came from paradise, and there is a story behind it.

It is said that Adam Safiullah was born in paradise. However, he wandered alone there for many years.

God created Eve from the left side of Adam's body. Thus, for many years, Father Adam and Mother Eve lived joyfully in paradise, which was filled with flowers, beautiful trees, and abundant fruits.

The peacock and the snake were the guardians of paradise and did not allow anyone to enter.

Wheat, which initially grew only in paradise, was even larger than trees, and its grains were bigger than some fruits. One day, the Merciful God warned Adam Safiullah: "You may taste all the fruits, but do not touch the wheat!" Adam Safiullah promised that he would never do so.

At that moment, Satan appeared from somewhere and came to the gates of Paradise, seeking to enter. However, no matter how much he pleaded, the snake and the peacock did not allow him to enter. They said, "If God sees us, He will give us severe punishment". "I will show you an easy and good way that God will never see," Satan convinced them. "I will enter through your mouth and exit from your back, and then even God will not see me," said Satan.

Thus, Satan deceived the peacock and the snake, persuading them to help him. He entered through the Snake's mouth and

exited through the hole at its back, allowing him to enter Paradise with ease. He found Adam and Eve in Paradise and mocked them, saying, "Why don't you taste the sweet fruit of wheat?" . "It is forbidden to taste it," Adam and Eve replied. "Then you have never truly felt the pleasure of paradise," he said mockingly.

Thus, Satan convinced them, and Adam took a knife to cut the sweet fruit of wheat so that both of them could eat it. (It is said that the mark of Adam's knife is still visible on wheat grains to this day.)

However, when they ate the wheat, they felt stomach pain and defiled Paradise. They were both expelled from Paradise, along with the peacock and the snake, and were cast into different corners of the earth.

Adam and Eve searched for each other for many years and only after a long time were they reunited.

On earth, the main challenge for Adam and Eve was finding daily food. At that moment, Hazrat Murtaza Ali, in the form of Grandfather Farmer, brought wheat seeds from Paradise and handed them to Adam and Eve. Then, he taught Adam the methods of sowing seeds, watering the wheat, harvesting, threshing, and gathering the grain. After this, Hazrat Jibrail came to support Adam and taught him how to build a mill and the methods of preparing wheat-based foods. That is why, to this day, people consider the mill to be a creation of Hazrat Jibrail (Gabriel). In some villages of Bartang, even now, when entering a mill, people touch the grinding stone and say, "O Hazrat Shahpari Jibrail!"

(As narrated by Qirgizboy Tulegov, an 88-year-old resident of Ghudara village).









SODPARVIN, OR HOW THE PEOPLE OF BARDARA VILLAGE PROTECT WHEAT FIELDS FROM SPARROWS

This belief and the custom of driving away sparrows from wheat fields have now only been preserved in the villages of Bardara and Chadud in Bartang.

According to the residents of Bardara village, Sodparvin is celebrated in this village only on a Friday each year, in the same specific location of the area called Badum. This celebration takes place in late December or early January, depending on which day Friday falls on.

The Voji of the village (voji is a term from the Bartangi dialect) means leader, elder, great one, guide, or chief.

As the villagers explained, only members of a single lineage can become Voji in Bardara. All the people of Bardara, in the period before the October Revolution, were disciples (murids) of two spiritual leaders: Pir Saidaslamkhon and Pir Shohi Safdar. The Vojis were representatives of the lineage of Pir Saidaslamkhon.

Currently, the Voji of the village, Muborakshoh, is a descendant of Khalifa Davlatshoh. He sets the date and announces it in the village: "Sabo Sodparvin (Sodparwedz)," meaning "Tomorrow is Sodparvin" (it is also called Sodparwedz).

The next day, around 9:00 AM, the men of the village (participation in this gathering is only allowed for men) gather in Badum near the Sod (Sod—called Sed in the Shughni language—means stone). This special stone is located in the middle of a cultivated field. Its lower part is embedded in the soil, while approximately one meter of it rises

above the ground. The stone, in its length and height, is approximately the size of a donkey's body. Although this stone does not have the status of a grave, it is revered by the villagers. It has been used for this tradition for centuries, and according to people's beliefs, removing, breaking, destroying, or contaminating it is strictly forbidden.

According to tradition, when coming to the stone, each household representative must bring 200-300 grams of wheat flour with them. The Voji himself receives the flour. This act is mandatory, meaning that everyone present at the Sodparvin site must first offer the flour to the Voji, greet everyone, and then jump over the stone (Sod) once. Only after that they can join the group of people. Jumping over the stone is a joyful moment, welcomed by the attendees with laughter, applause, and celebration.

Everyone hands over the brought flour to the Voji. The Voji divides the flour into two parts: half is used for making wheat porridge (atola bāt), and the other half is set aside for baking flatbreads (kulcha) and sweet bread (qumoch tarid). He keeps one portion of the flour for bāt in front of him, while the other portion is handed over to the nearest household located near Badum for baking kulcha (flatbread) and qumoch tarid (sweet bread).

To prepare qumoch, a large flat stone is placed at the bottom of the tandoor and heated with firewood. Then, the flat stone is cleaned of ash, the qumoch dough is placed on top, and its surface is covered with hot ash.









THE SACRED JUNIPER TREES OF BARDARA: GUARDIANS OF THE LAND'S FERTILITY AND PROTECTION AGAINST NATURAL DISASTERS

When you step into the picturesque village of Bardara, which sits like a little bride among the mountains, the first thing that captures your attention is the three giant juniper trees standing in the village.

These massive trees belong to the local species of junipers (ambaws/ambakhc), and their branches and leaves emit a wonderfully pleasant fragrance. Each of these trees has a thickness of more than 5 meters and reaches a height of approximately 20 meters. Local juniper trees of such immense size are, unfortunately, now rarely seen in the Badakhshan region.

The residents of Bardara believe that these juniper trees were planted by the blessed hands of Pir Said Nasir Khusraw and that they are over a thousand years old. According to the people of Bardara, the age of these trees was also estimated to be over a thousand years by Chinese natural scientists who visited the village five years ago.

The beautiful juniper trees stand tall at three different locations in the village: one at the entrance, the second in the middle, and the third at the far end of the village. The remarkable thing is that these trees are aligned in a straight line and are exactly 500 meters apart from each other. (The villagers have measured this distance multiple times and are convinced of its accuracy.)

For centuries, people have treated the juniper trees with great care and reverence. They always keep the surrounding area clean and never build structures or roads near them. Cutting their branches is

prohibited, and even dry branches cannot be removed from around the juniper trees. According to the villagers, in the 1940s, there was a teacher at the school named Khudobakhsh from another village. One day, in order to meet the school's firewood needs, he decided to cut branches from these juniper trees. The elders of the village fell to their knees in front of him, begging him not to do it. However, Khudobakhsh ignored their pleas and went ahead with cutting the branches. A year later, his right arm began to ache severely from the shoulder, and after some time, unable to endure the pain, he passed away.

Juniper branches may only be used for making small torches (charoghak), which are lit during traditional celebrations and at the resting places of ancestors.

There is a story, that Bardara was once a very beautiful village, blessed with vast, fertile lands.

However, the main problem of this village was floods and mudslides, which annually destroyed large areas of farmland—lands that the villagers had cultivated with great effort and hardship. One day, Pir Shohnosir entered the village. The villagers shared their ongoing struggle with him regarding the constant threat of floods and mudslides. Pir Shohnosir listened to their concerns, then planted these evergreen trees and reassured the people that their village would never again suffer from any natural disaster. He advised the villagers that if they ever felt threatened by nature, they should turn to these juniper trees for protection. Since that time, these beautiful juniper trees have been revered by the people and now serve as a living shrine for them.

The First Juniper Tree stands tall at the entrance of the village. According to the beliefs of the people of Bardara, if someone suffers from headache or toothache, they should prepare food and place it beneath this tree to recover. During the Nowruz festival, only women gather under this tree.

They throw a rope over the branches of the juniper tree and play on a swing (argunchak). At the same time, they pray to the Creator and to nature, asking for peace, family well-being, and the health of the village women.

Then, a group of women gathers under the First Juniper Tree, playing the daf (a traditional drum) with the hope of relieving sorrow and hardship from the mountainous region.

The Second Juniper Tree, which stands in the middle of the village, is called Farmon (Command).

In ancient times, when the blessed decrees of the Imam of the time were sent from the Darghah (spiritual court), they were read aloud to the people right here, beneath this very juniper tree.

It is said that, to keep the decree paper clean, in ancient times, the villagers would place it in a small box and hang it among the branches of this tree. According to the belief of the people the blessed hair of Hazrat Hasan and Husayn was also placed in that small box. The Farmon Juniper Tree serves as a council (forum) and village club. Since ancient times, beneath this juniper tree was the gathering place for the villagers, where they would meet for consultations and discussions. Under this tree, the communal meal (osh-e khodoi) was prepared, and all the urgent economic and social matters of the village were resolved here.

The special characteristic of this juniper tree, according to the villagers, is as follows: if there is a threat of excessive snow or rainfall (or, conversely, if there is a fear of a lack of snow or rain), people gather under the tree and perform a ritual offering (nazr-e khodai), praying to the Creator to grant their wish for the opening (or closure) of the path due to the snow or rain. Similarly, if other dangers such as earthquakes, droughts, epidemics, or diseases affecting people and animals arise, the villagers gather under the Farmon tree to perform ritual offerings, recite prayers, and seek divine help from the Creator. According to the villagers, their pleas are always heard by God Almighty.

Now, beside the Farmon tree, the villagers have built a very beautiful knowledge center, which has a large collection of books. The villagers gather in this center to read books, play music, and listen to spiritual teachings.

The Third Juniper Tree, which stands at the bottom of the village, also has healing properties. Anyone who falls ill and, with the intention to seek healing, goes to the base of this tree to make a prayer, will have their pain relieved.

Thus, according to the beliefs of the residents of Bardara, since the juniper trees were planted, the village has been saved from floods and mudslides. As a result, the wheat fields of the village have remained safe, ensuring that the villagers are provided with bread every year.

The sacred juniper trees prevent any other natural disasters from harming the people of the village.

(As narrated by Bodurbek Muzofirov, 70 years old, resident of Bardara village).





THE PEOPLE OF THE BARTANG VALLEY CONSIDER WHEAT AND ITS PRODUCTS AS DIVINE BLESSINGS

says the historian and ethnologist of Badakhshan, Aloiddin Shohinbekov, candidate of historical science, head of the Department of History, Ethnography, and Archaeology at the B.I. Iskandarov Institute of Humanities. As part of the "Bartang Wheat Park" project, this scholar conducted an exploratory research trip to the valley and collected the beliefs and traditions related to wheat among the residents of Bartang.

The scholar published all the collected materials in a separate book titled "Beliefs and Traditions of the People of Bartang Regarding Wheat" (Field Materials in Anthropology), which was released in Khorugh.

As mentioned in the book, wheat among the people of Bartang is not only seen as a food source and crop, but it also holds high cultural value.









THE PO "ECO CONSULTANCY" IS AN INITIATOR OF THE PRESERVATION OF LOCAL WHEAT SEEDS IN TAJIKISTAN

PO "ECO Consultancy" was officially registered in Tajikistan as a nationwide public organization in December 2014. The founders of this organization is made up of a group of initiators, consisting of graduates from universities in the USA and Europe specializing in sustainable development, agriculture, natural resource management, public policy, and administration. The organization's activities primarily began in 2010, initially focusing on holding seminars and roundtable discussions to identify priorities and develop practical recommendations in the field of sustainable development.

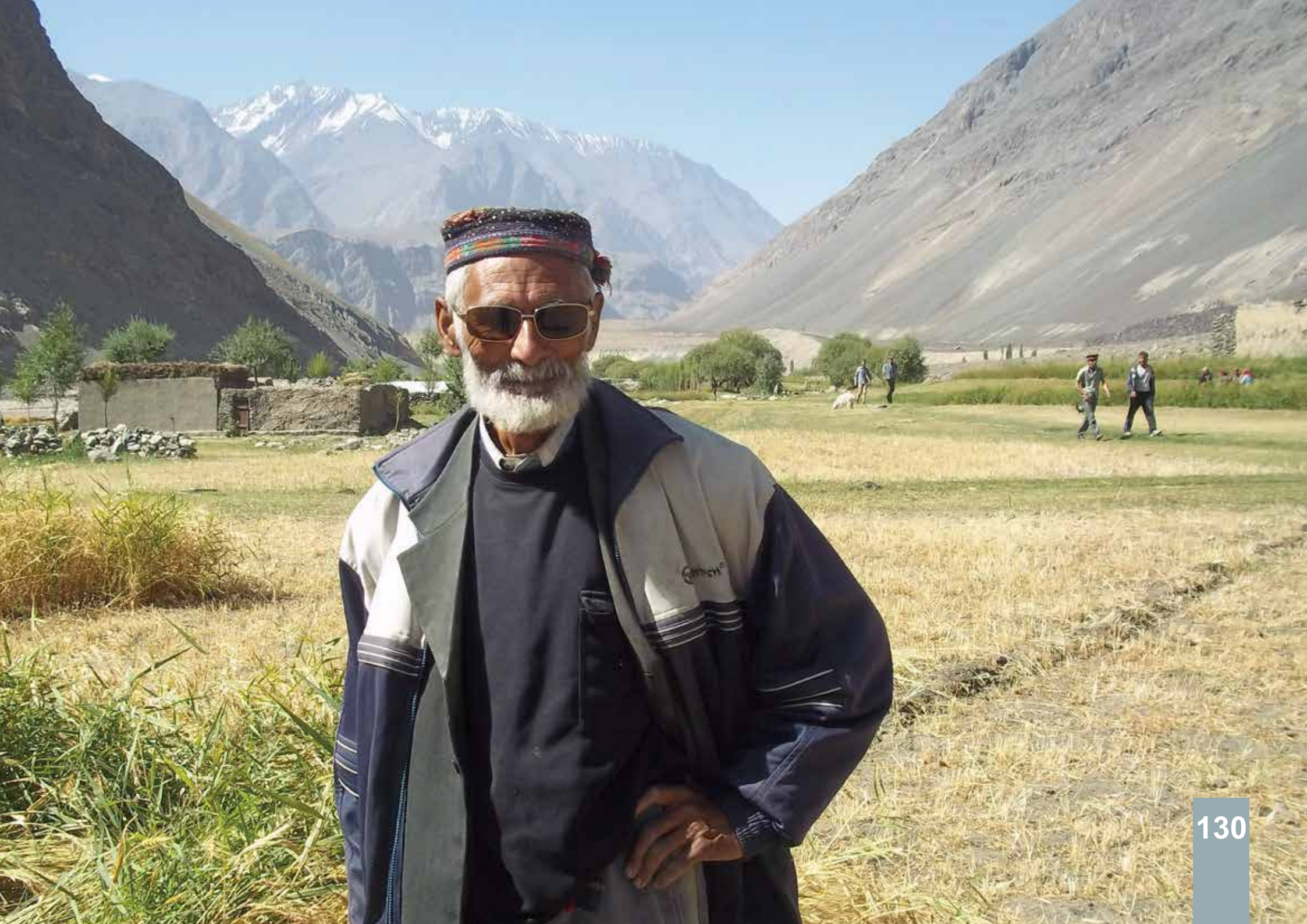
The organization quickly strengthened its position in society and gained the honor of establishing a dynamic network involving stakeholders such as local public organizations, government structures, international academies, specialist networks, volunteers, and other representatives of civil society. Such a strong foundation was laid, allowing PO

"ECO Consultancy" to later evolve into a fully mature organization, carrying out clear and significant work in the field of sustainable development in the remote and difficult-to-reach areas of Tajikistan.

The main goal of PO "ECO Consultancy" is to provide geo-contextually specific technical recommendations that hold social and economic significance. The organization assists local communities in the use and management of natural resources in their surroundings, providing these communities with the opportunity to improve their lives in geographically remote areas.

The organization's goal is also to enhance the resilience of communities against climate change by promoting the proper management of natural resources and other assets necessary for sustainable living. The ultimate goal of PO "ECO Consultancy" is to achieve physical security and economic well-being within a healthy civil society.









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<https://elena-2004.livejournal.com/66179.html> - Photo album on Bartang

Other images sourced from the internet.

б





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БОВАРҲО ВА АНЪАНАҲОИ
МАРДУМИ БАРТАНГ НИСБАТ
БА ГАНДУМ
(МАВОДИ САҲРОЙ - МАРДУМШИНОСИ)

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