IPSI Case Study Summary Sheet

Please submit this form along with your case study. We ask that you keep your responses here as concise as possible. This information will be posted on the IPSI website unless otherwise requested. Please inform the IPSI Secretariat if there are any responses you would not like made public.

Basic Information

Title of case study *(should be concise and within approximately 25 words)*
The socio-ecological production landscapes of three ethnolinguistic enclaves in the Dagestan high Caucasus. Sustaining a multi-millennial agro-pastoral continuum - the example of Verkhnee Gakvari
Submitting IPSI member organization(s)
Institute of Ecology and Sustainable Development, Dagestan State University, Makhachkala, Russia
Other contributing organization(s) *(IPSI members and/or non-members)*
Author(s) and affiliation(s)
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Format of case study *(manuscript or audiovisual)*	manuscript	Language	English
Keywords *(3-5 key concepts included in the case study)*			
high mountain communities, sustainable agro-pastoral economy, ecological altitudinal zones, cultural landscapes, ethno-linguistic enclaves, ecology and education.			
Date of submission *(or update, if this is an update of an existing case study)*		23.11.2021	
Web link *(of the case study or lead organization if available for more information)*			

Geographical Information

Country *(where site(s) or activities described in the case study are located – can be multiple, or even "global")*
Russia
Location(s) *(within the country or countries – leave blank if specific location(s) cannot be identified)*

Tsumadinskiy District, Republic of Dagestan									
Longitude/latitude or Google Maps link *(if location is identified)* ??????									
Ecosystem(s) *(please place an "x" in all appropriate boxes)*									
Forest	x	Grassland	x	Agricultural	x	In-land water		Coastal	
Dryland		Mountain	x	Urban/peri-urban		Other (Please specify)			
Socioeconomic and environmental characteristics of the area *(within 50 words)*									
Occupying tributary valleys flowing into the upper Andiiskoe Koisu (River) in the south-western high Caucasus of Dagestan are the Godoberi, Chamalal and Bagulal ethnolinguistic communities. Their territories are characterized by ecological-functional altitudinal zones from sub-alpine to alpine which for some 6-8 millennia have nurtured human settlement through sustainable subsistence agro-pastoralism.									
Description of human-nature interactions in the area *(land-use, traditional resource management practices etc. – within 50 words)*									
The Godoberi, Chamalal and Bagulal communities have optimised the sustainable subsistence potential of their natural environment through the cultivation of core cropland zones of rich post-glacial soils, the raising of animals on adjacent pastures and utilising nearby forest resources for fuel, building materials, manufacture of implements, food and traditional medicines.									

Contents

Note: The following fields are used for information about activities described in the case study or the production of the case study itself, and contents may vary depending on the nature of the case study. For example, a case study about on-the-ground activities may include the rationale, objectives etc. for the activities; a case study about a SEPLS-related policy may describe the policymaking process; or a case study describing a SEPLS may address particular practices used there. Please make an effort to fill as many fields as possible.

Status *("ongoing" or "completed")*	ongoing	Period *(MM/YY to MM/YY)*	01/20 to 09/21

Rationale *(why activities or policies described, or information shared in the case study are needed – within 50 words)*

Dagestan's Tsumadinskiy District economy generates insufficient revenue to sustain its population independently. However, its traditional mountain communities pursuing subsistence agriculture within unique cultural landscapes, present significant potential for developing sustainable eco-cultural tourism, organic agriculture, dairy and meat production and natural food resources, which requires appropriately educated local human resources and support infrastructure.

Objectives *(goals of activities or policies described, or of producing the case study – within 50 words)*

This study examines the characteristics of the landscapes of the upper Andiiskoe Koisu which enabled its long continuum of human occupation and the contribution of structured systems of public education in sustaining collective environmental management in three ethnolinguistic enclaves with a particular focus on the exemplary contributions of the Verkhnee Gakvari community.

Activities and/or practices employed *(within 50 words)*

The case study involved an extensive review of the relevant literature and on-line resources. Communities were visited across the region and discussions were undertaken with their representatives, as well as with other stakeholders. A particular emphasis was placed on environmental education in schools and its impact in sustaining socio-ecological production landscapes.

Results *(within 50 words)*

This case study has enabled a fuller understanding of the ways these communities have sustained their natural environments and cultural landscapes. It has already engendered support for its developmental objectives from state authorities, including Dagestan State University's new community engagement initiative, The University of the People, in the Tsumadinskiy District.

Lessons learned *(factors in success or failure, challenges and opportunities – within 40 words)*

The study (a) indicates the degree to which these communities are knowledgeable about the needs of the natural environments which sustain them and (b) the role which structured ecological education of children can play in the sustainable use of their environment.

Key messages *(within 40 words)*

Traditional rural agricultural communities such as those studied here understand in considerable depth the natural environment in which they live and work but are often not sufficiently assisted by authorities in promoting and implementing its protection and sustainable utilisation for economic development.

Relationship to other IPSI activities *(if the case study is related to any other IPSI collaborative activities, case studies, etc.)*

Clearly, there are elements of this study which are related to a number of published IPSI case studies, especially those involving high mountain areas.

Funding *(any relevant information about funding of activities or projects described in the case study)*

Research activities and publication undertaken through the operating budget of the Institute of Ecology and Sustainable Development of Dagestan State University.

Authors' Profiles

This research was undertaken by a collective of specialists in both environmental management and community development policy of Dagestan State University in collaboration with resident local experts from the communities studied in the upper Andiiskoe Koisu region.

Professor Guy Petherbridge heads the Caspian Centre for Nature Conservation at the Institute of Ecology and Sustainable Development, Dagestan State University, where he is coordinating regional conservation initiatives with other Caspian region states and researching the evolution of human interactions with the environment in the high Caucasus. He has been active in heritage research and management in the Islamic world for many years and was previously: Director, Preservation and Conservation Education Programs at Columbia University; Chairman, Heritage Central Asia, UNESCO diplomat, Tashkent Office, Uzbekistan and external evaluator and global strategist for UNESCO's Memory of the World programme.

Magomed Magomedovich Ismailov graduated in biology from Dagestan State University in 1983. He was then appointed director of the Sasitli school in the Tsumadinskiy District. In 1987 he moved back to teach in his home village and became director of Verkhnee Gakvari School in 2003. He has received many awards for his contribution to education including the Award for Excellence in Public Education of the Republic of Dagestan and that of Honoured Worker of General Education of the Russian Federation. He is a member of the regional expert certification commission for biology and chemistry and chairman of the sanitary and environmental commission under the village administration. He was the principal organizer of the scientific and practical conferences "Environmental Problems of Tsumadinskiy District and Ways to Solve Them" (2010) and of the "Ecology of the Mountain Territories of Dagestan: Problems and Pathway to Their Solution" (2017).

Shamil Magomedovich Magomedov graduated in biology from Dagestan State University in 2007 and then taught at the villages of Kvanada and Kedi in Tsumadinskiy District. From 2009 he has been teaching biology at the Verkhnee Gakvari School. He has been awarded the Certificate of Honour of the Ministry of Natural Resources and Ecology of the Republic of Dagestan "For ecological education of the younger generation", the Certificate of Honour of the Ministry of Education of the Russian Federation "for conscientious work, achievements and merits in the field of education" and also an honorary diploma from the Department of Education of the Tsumadinskiy District " For many years of conscientious and impeccable work, high professional skills and a creative approach to teaching and upbringing of schoolchildren, the formation of intellectual, cultural and moral development of the individual, a great contribution to the development of education in the district and active participation in the social life of the school and district."

Murtazali Kh. Rabadanov is Rector of Dagestan State University.

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Madina G. Daudova is a member of the editorial team of South of Russia, Ecology, Development.

Abdul-Gamid is a student resarcher at the Institute of Ecology and Sustainable Development of Dagestan State University, specializing in Islamic ethics and the environment.

Contributions to Global Agendas

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Please place an "x" in the "direct" or "indirect" boxes next to any of the CBD's Aichi Biodiversity Targets to which the work described in this case study contributes as appropriate. Note: please mark only those that the case actually has made or is making a contribution, not those to which it could make a potential contribution in the future.

Target	Description	Direct	Indirect
	By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	x	
	By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.		
	By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.		
	By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.		
	By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	x	
	By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.		x
	By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	x	
	By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.		
	By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	x	
	By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.		

	By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.		x
	By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.		x
	By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.		x
	By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.		x
	By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.		
	By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.		
	By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.		
	By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.		x
	By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	x	
	By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.		

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

Please place an "x" in the "direct" or "indirect" boxes next to any of the UN Sustainable Development Goals to which the work described in this case study contributes as appropriate. Note: please mark only those that the case actually has made or is making a contribution, not those to which it could make a potential contribution in the future.

SDG	Description	Direct	Indirect
	End poverty in all its forms everywhere		x
	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	x	
	Ensure healthy lives and promote wellbeing for all at all ages	x	
	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	x	
	Achieve gender equality and empower all women and girls	x	
	Ensure availability and sustainable management of water and sanitation for all		
	Ensure access to affordable, reliable, sustainable and modern energy for all		
	Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all		x
	Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation		x
	Reduce inequality within and among countries		x
	Make cities and human settlements inclusive, safe, resilient and sustainable	x	
	Ensure sustainable consumption and production patterns	x	
	Take urgent action to combat climate change and its impacts		x

	Conserve and sustainably use the oceans, seas and marine resources for sustainable development		
	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation, and halt biodiversity loss	*x*	
	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels		*x*
	Strengthen the means of implementation and revitalise the global partnership for sustainable development		*x*