

## **PROMOTING ENVIRONMENTAL AWARENESS IN SUSTAINABLE LAND MANAGEMENT AND INTEGRATED PLANNING**

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### **ABSTRACT**

About five million hectares of land in Kyrgyzstan have been subjected to water and wind erosion. Improper land use can lead to land degradation on a large scale and in some cases it becomes irreversible. Some main causes of land degradation are the intensive use of chemical fertilisers by farmers, overgrazing and lack of funds for land improvement. This harms the environment by causing soil degradation, deforestation, and desertification, as well as pollution. In order to minimise these problems, there is a need to increase public knowledge and environmental awareness of sustainable land management. Environmental awareness can be difficult to measure, but environmental awareness programmes can help reduce the impact of human activities on the environment. This project is an attempt to address the importance of environmental education, its aims and objectives, and methods of intervention for raising environmental awareness with regard to sustainable land management. It also discusses the successful experience of CAMP Alatoo PF in raising public awareness through information campaigns in the Bazar-Korgon district of Jalal-Abad region, Kyrgyzstan. The report describes activities aimed at raising environmental awareness, changing the consciousness of target groups and land use practices to conserve biodiversity and reduce degradation of pastures, forests, and arable land. Sustainable planning reduces resource loss and enhances resource efficiency, based on the principles of concerted stakeholder cooperation.

**Key words:** land use, environmental awareness, biodiversity, rangeland degradation, integrated planning

Maldybaeva D (2022) Promoting environmental awareness in sustainable land management and integrated planning. GRÓ Land Restoration Training Programme [Final project]  
<https://www.grocentre.is/static/gro/publication/847/document/maldybaeva2022.pdf>

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## **ABBREVIATIONS**

CAMP	Central Asian Mountain Partnership Programme
ELD	The Economics of land degradation
ESD	Education for Sustainable Development
FAO	Food and Agriculture Organization
GDP	Gross domestic product
GEF	Global Environment Facility
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
KAP	Knowledge, Attitude and Perception
NGO	Non-government organization
PF	Public Foundation
SDG	Sustainable Development Goals
SLM	Sustainable land management
UNCCD	United Nations Convention to Combat Desertification
UNESCO	The United Nations Educational, Scientific and Cultural Organization

## **1. INTRODUCTION**

All over the world, there is currently enormous pressure on land resources, and this is only expected to increase in the future (UNCCD 2017). The degradation of the Earth is increasing, and humans are playing a part in this degradation. This is evidenced by the many environmental problems we face every day, such as pollution, waste, and depletion of the ozone layer, acid rain, and species extinction. More than 75% of the Earth's land area has already been degraded and more than 90% could be degraded by 2050 (GEF 2019). Soil is changing its structure, becoming less productive, becoming waterlogged, saline, and polluted, losing its nutrients, and being depleted. Reduced biodiversity and climate change are putting the functionality and productivity of the land at even greater risk. Increasing carbon emissions, high temperatures, changing rainfall patterns, soil erosion, species extinction and increasing water scarcity are likely to affect the suitability of vast regions for human food production.

Kyrgyzstan is no exception; land degradation has not spared it. Kyrgyzstan is a landlocked country in Central Asia and the land is very important for the country's economy. However, due to overgrazing and unsustainable land management, rangelands are degraded annually at a cost of around USD 600 million, representing 16% of the country's gross domestic product (GDP) (UNCCD 2018).

The level of degradation of pastureland in Kyrgyzstan is of critical concern. Excessive and unregulated grazing and deforestation are causing soil erosion and affecting agriculture. Climate change risks are expected to have a further negative impact on governance issues (National Development Programme of Kyrgyz Republic 2021). The main causes of deterioration are the intensive use of chemical fertilisers, insufficient funds for improvement measures, and overgrazing, which affects the environment and threatens biodiversity, leading to the destruction of all existing ecosystems (Abdiev & Sabirbekov 2019).

Low livestock productivity, an undifferentiated economy, low literacy levels and a traditional rural culture that views livestock as a main source of cash income and a means of accumulation are the main reasons for the increase in livestock numbers in Kyrgyzstan (GIZ 2021). Livestock and pasture ecosystems are in a vicious cycle. Overgrazing and pasture degradation lead to a reduction in feed availability, which in turn reduces livestock productivity. To compensate for the decline in productivity, households continue to increase the number of livestock, which increases the pressure on pastures and leads to further degradation.

A UNCCD report (UNCCD 2017) states that one of the obstacles to addressing and implementing sustainable land management (SLM), besides limited funding, is a lack of access to appropriate technologies, weak governance structures and lack of access to knowledge and information on SLM and its proper implementation.

Raising public awareness of environmental issues is regarded as one of the tools for acting and creating an enabling framework for SLM (ELD 2019). It is one of the necessary actions to ensure effective and accessible knowledge dissemination and transfer.

Caspari et al. (2015) emphasise that implementation of SLM will be facilitated if certain conditions are met, one of which is awareness of soils and land. People living off the land usually have a strong desire to protect and sustainably manage their land assets but more efforts are needed to raise awareness of the vital functions of land and soil and the devastating consequences of inaction at policy and decision-maker level (Caspari et al. 2015).

The CAMP Alatoo Community Foundation has been implementing sustainable mountain development projects in Kyrgyzstan for 20 years. Education is one of the activities of the foundation, which reaffirms its commitment to achieving the 17 Sustainable Development Goals (SDGs) developed in 2015 by the UN General Assembly. CAMP Alatoo's aim is to enhance environmental education in the mountainous regions of Kyrgyzstan and to help improve the lives of local communities.

Education is one of the Foundation's activities. A special feature of this strand is the citizen science approach, i.e., involving ordinary people – pupils, teachers, farmers, and local government officials – in the collection of scientific data, its analysis and interpretation. Given the limited availability of environmental data at the local level, especially in remote regions, this opportunity is very valuable for the citizens involved, as they can increase their knowledge about their environment and gain a scientific basis for discussing and responding to environmental change at the local level.

One successful example of CAMP Alatoo's work in raising public awareness of environmental issues has been the information campaigns carried out as part of their environmental education activities. The Foundation has developed a Communication Strategy (CS) as part of its environmental education and awareness component.

Given the results of CAMP Alatoo's awareness raising, it is important to consider that environmental education has been used as a tool to raise awareness and understanding of environmental issues in the region.

Well-structured and resourced SLM programmes can provide global environmental benefits by combating land degradation and by halting and reversing the decline of biodiversity and ecosystem services on land (Henry et al. 2018). Effective and widespread adoption of SLM is believed to provide large social and economic benefits through increased productivity and sustainability of agro ecosystems. This is necessary to address two of the greatest challenges facing the world today: food security and climate change.

Thus, the driving forces behind land degradation in Kyrgyzstan are livestock growth and overgrazing, deforestation, and pressure on natural resources (UNCCD 2017). All these factors are closely related to each other. It is possible to influence these factors through the introduction of SLM at the local level through an awareness-raising campaign. The development of an information campaign for land users with a training programme, a brochure, and podcasts on SLM would be one way of addressing land degradation in Kyrgyzstan. The aim is sustainable land management and the conservation of land resources and related ecosystem functions while maintaining the production of goods and services, especially safe and healthy food.

Considering the above, the overall objective of this project is to raise public awareness in Kyrgyzstan of the benefits of sustainable land management for maximum benefits without disturbing natural ecosystems. The specific objective of the project was to develop educational material and a training course plan for a public awareness campaign to be carried out in the of Bazar-Korgon district of Jalalabad region, Kyrgyzstan, during the period from April to October 2023. The CAMP Alatoo Public Foundation will organise and implement the campaign. Moreover, the public awareness campaign conducted in 2023 will be organised as a pilot project, with the intention to implement it in other regions of Kyrgyzstan in the future.

## **1.1 Environmental public campaigns and education**

The fact that humanity has no other planet as habitable as our Earth has led us to consider the need to protect the Earth (Omoogun 2016). People are aware that planet Earth is losing its biological, physical, and chemical capacities year after year. This understanding of the state of the environment emerged during the period of environmentalism, which in turn gave birth to the concept of environmental education, which aims at raising environmental awareness (Omoogun 2016). The underlying assumption is that raising the level of environmental awareness will enable measures to be taken that will stop the misuse of the environment and its resources.

Education is now an increasing priority as a determinant for achieving sustainable development. In 2005, UNESCO launched the United Nations Decade of Education for Sustainable Development, which reaffirmed the key role of education in instilling values that foster sustainable development and in strengthening sustainable societies (UNESCO 2007).

Education for Sustainable Development (ESD) is a complex and constantly evolving concept (UNESCO 2007). Therefore, its implementation and delivery pose challenges for both developed and developing countries. The UN Decade aimed to see ESD put into practice in thousands of local situations with ESD embedded in a multitude of learning processes. Such an approach was meant to inspire further action and contribute to the goals and objectives of the Decade. Organisations, local communities, and individuals would thus be able to participate actively in the global movement for sustainable development.

In order to protect and preserve the environment, environmental education needs to be emphasised in both formal and non-formal education (Agboola 2014). Action can be taken in a variety of areas to increase environmental awareness and education. Some of these categories are using the media, awareness campaigns that integrate environmental issues into mainstream education, raising awareness and education of specific target groups, and encouraging public participation in environmental issues. Celebrities and environmental campaigns, as well as other individuals and institutions, can also be a means of influencing people. Moreover, educational, and awareness-raising efforts can be directed at almost any sector of society (Agboola 2014). They can be aimed at raising general public awareness on environmental issues, or they can be a targeted campaign or educational effort aimed at a specific sector (or target audience) on a specific issue. An educated public can be one of the most powerful weapons in the fight against environmental harm. The ways in which the public can help with enforcement are as numerous as the potential approaches to raising public awareness. Caring for the environment does not require an individual to become an environmental activist, simply to know more about their environment. The public must understand that if we degrade the environment, we are harming ourselves. It is the duty of educated people to educate others about the negative effects of the environment.

Public awareness is important to increase enthusiasm and support, stimulate self-mobilisation and action, and mobilise local knowledge and resources (Climate Adapt 2016). Raising awareness requires effective communication strategies to achieve the desired outcome. The combination of these communication strategies for the target audience over a period of time can generally be referred to as an 'awareness-raising campaign'. The aims of such campaigns include raising concern, informing the target audience, creating a positive image, and trying to change their behaviour.

Awareness-raising campaigns can target a wide range of people, for instance the general public, stakeholder groups, or groups of people in a region affected by a particular climate threat (Climate Adapt 2016). The ultimate goal of such campaigns is to achieve long-term and sustainable behavioural change. Awareness raises concerns about the knowledge of individuals and organisations. It aims to ensure that all relevant regional and sub-regional bodies understand and respond to the impacts of certain climate impacts. However, they can also focus on certain impacts that are considered most significant. An example is the "Live with Water" campaign in the Netherlands (Climate Adapt 2016). Such campaigns are considered most effective if several modes of communication are used together, for example distribution of printed materials, organisation of public meetings and trainings, professional advice, communication and information through social networks and media, and use of informal networks to spread information (Climate Adapt 2016). This can be combined with the establishment of community self-advocacy groups that promote the self-sufficiency of residents and businesses to minimize the risk of personal safety and property damage, for example during a flood.

Mulholland et al. (2017) noted that engaging stakeholders in awareness-raising is particularly important in realising the objectives of an information campaign. In the European Sustainable Development Network (ESDN) report they noted that stakeholders and stakeholder groups tend to be more familiar with how best to reach members of their communities and interest groups than are larger bodies, such as sub-national, national, regional, and international institutions (Mulholland et al. 2017). Communication and awareness-raising tools can therefore be more specifically targeted to particular stakeholder groups, which may elicit a more pronounced response from the target audience.

## **1.2 Project background**

The Kyrgyz Republic has a land area of 19.99 million hectares, of which 4.3% is forest, 4.4% is water surface, 54.0 % is agricultural land, and the remaining 37.3% is categorized as "other". The country's population is 6.592 million (National Statistical Committee of the Kyrgyz Republic 2018).

Kyrgyzstan has a rich and varied nature. Majestic mountain ranges alternate with high elevation flat ridges, up to 4,000 metres above sea level, and broad valleys or vast intermountain basins with lakes framed by snow-capped peaks. The climate of the country is continental, with a great variety of microclimates. Because of the vertical zonality in Kyrgyzstan, winters are cold and summers are hot (Centre of Climate Change in the Kyrgyz Republic n.d.). Kyrgyzstan is also known for its water potential; therefore, it is often referred to as the "Water Tower" of Central Asia. However, because of land degradation, which is happening very quickly, the nickname "Water Tower" is losing its relevance. The agricultural areas in Kyrgyzstan are now considered vulnerable because of summer water shortages in recent years. Degradation is a particular problem, especially wind and water erosion, which affects almost 46% of agricultural land (Abdiev & Sabirbekov 2019).

According to the land cadastre, the area of land subject to water and wind erosion is about five million hectares or 45.7% of the total area of agricultural land (Abdiev & Sabirbekov 2019). Inappropriate land use can lead to threats, one of which is soil degradation (Figure 1). The degree of degradation has a great impact on the condition of agricultural land and the level of poverty in rural areas. The lack of a state policy on sustainable land management (SLM) has led to large-scale degradation, which in some cases has become irreversible.



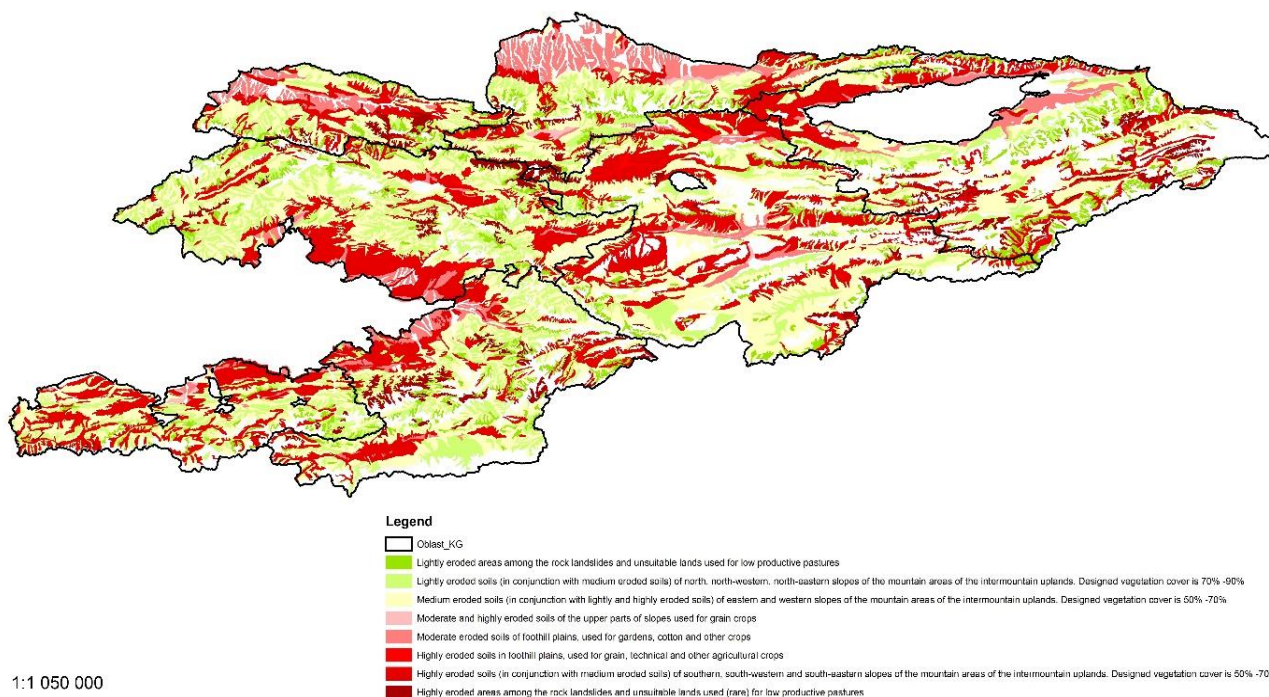


Figure 1. Degree of land degradation in the Kyrgyz Republic. (Source: CAMP Alatau 2021).

Agriculture is considered economically important for Kyrgyzstan, with agriculture accounting for 24% of the country's GDP (National Statistical Committee of the Kyrgyz Republic 2021). About 65% of the population live in rural areas where of 34% (or 14% of the total population) are predominantly engaged in agriculture. This shows that agriculture is important not only for the economy, but also for the social and political spheres in Kyrgyzstan (National Statistical Committee of the Kyrgyz Republic 2021).

Agriculture is a key economic sector in the Kyrgyz Republic government development programmes. The Kyrgyz Republic is made up of seven regions (Figure 2). Each region has its own climatic and geographical conditions, which makes it possible for each region to grow its own products (FAO 2015). If in Chui oblast farmers grow sugar beets, those in Issyk-Kul oblast grow apples and pears, which are exported to neighbouring countries. In Batken oblast, farmers grow apricots; Osh and Jalal-Abad oblasts are the largest producers of cotton and walnuts; Talas oblast exports beans and soybeans while in Naryn oblast cattle breeding is the main agricultural activity, as climatic conditions do not allow vegetable crops.



Figure 2. Administrative map of the Kyrgyz Republic. (Source: CAMP Alatau 2021).

### 1.3 Area of intervention

Jalal-Abad oblast covers an area of 32,418 km<sup>2</sup> and includes eight administrative-territorial districts: Aksy, Ala-Buka, Bazar-Korgon, Nooken, Suzak, Toguz-Torou, Toktogul, Chatkal (National Statistical Committee of the Kyrgyz Republic 2022). The first five districts are located in the Fergana valley and intra-mountain depressions, with settlements at altitudes below 1,700 m. The Toguz-Torou, Toktogul, and Chatkal districts are located in depressions between mountain ranges and due to snow avalanches, it can be difficult to access settlements in these districts during the cold season, although they are located at altitudes below 1,600 m.

Kyrgyzstan is one of the most sparsely wooded countries in Asia, with forest cover of only 4.3% (National Statistical Committee of the Kyrgyz Republic 2018). Despite this, the world's largest connected natural walnut-wild fruit forests are to be found in Kyrgyzstan's south-western region (Jalal-Abad and Osh regions). They are considered the origin of many domesticated fruit and nut varieties. The in-situ conservation of these wild varieties is of global importance. At the same time, the forests form a significant basis for rural livelihoods and have important regulating functions for downstream regions, e.g., for the water regime. Degradation processes are induced by unsustainable resource management and use, e.g., overgrazing. The forest stand has changed in its structure and has been reduced in its diversity. Walnut harvests have decreased considerably, as has the natural resilience of the forests. The negative impacts on forests and the surrounding ecosystems are exacerbated by the already perceivable adverse impacts of climate change. The pressure on forest resources is increasing steadily due to the region's difficult economic situation (local populations have limited opportunities to generate income) as well as challenging social and demographic processes (population growth, uncontrolled settlement development, unregulated growth of livestock numbers) (National Statistical Committee of the Kyrgyz Republic 2020). Increased levels of awareness on the role of sustainable natural resources management, as well as environmental education, could help to preserve the forest and pasture ecosystems from further degradation and nurture environmental friendliness.

At present, population concentration continues around Bishkek and along the Osh-Jalalabad axis, which will put pressure on socio-economic infrastructure, environment, and food security (National Development Programme of Kyrgyz Republic 2021).

## **1.4 CAMP Alatoo Public Foundation**

The CAMP Alatoo Public Foundation was established in 2004 as the successor to the Central Asian Mountain Partnership Program in Kyrgyzstan (CAMP 2004). Using multi-stakeholder approaches, CAMP Alatoo strives to develop innovative, effective and at the same time simple and accessible technologies to raise rural communities' awareness and involvement in the management and conservation of natural resources. The mission of CAMP Alatoo is to improve the livelihoods of Central Asian communities through integrated natural resource management by developing, adapting, and implementing global and local expertise. The Foundation aims to develop and implement practical approaches and tools for sustainable management of natural resources at the local level within the framework of projects implemented in mountain regions with the support of international donors.

CAMP Alatoo promotes sustainable development in order to improve the lives of local communities throughout the country (CAMP Annual Report 2020). The organization strives to ensure that all projects implemented are: (1) socially oriented and sustainable; (2) can have a positive economic impact on the livelihoods of mountain and rural residents; and (3) contribute to the efficient and sustainable use of natural resources and energy. Achieving the Sustainable Development Goals (SDGs) through projects is one of the main objectives of the CAMP Alatoo PF.

What makes the CAMP Alatoo projects special is the citizen science approach, that is, the involvement of ordinary people, students, teachers, pasture users, farmers, and local government officials in collecting scientific data, analyzing it, and interpreting it. Given the limited availability of environmental data at the local level, especially in remote regions, this opportunity is very valuable for the citizens involved, as they can increase their knowledge about their environment and gain a scientific basis for discussing and responding to environmental change at the local level<sup>1</sup>.

## **2. PROJECT DESIGN**

The educational project "Promotion of Environmental Awareness in Sustainable Land Management and Integrated Planning" will be implemented through promoting environmental awareness in sustainable land management (SLM) and education for sustainable and more integrated rangeland, cropland, and forest land use planning with the involvement of local communities and stakeholders in the Jalal – Abad regions.

The project's design is based on two studies conducted by the CAMP Alatoo Public Foundation. The first study was conducted by the CAMP Alatoo Public Foundation in 2019 as part of the Biodiversity Conservation Project. The aim of the study was to assess the current situation in the pilot region in relation to existing knowledge, attitudes and perceptions about the use and management of natural resources, in particular forests. After these project activities, the final study was carried out online in 2020 because of the COVID-19 situation and partly face-to-face.

In the first study, the objective was to determine both the level of environmental awareness of the target groups in the pilot area, and which communication measures for increasing the

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<sup>1</sup>More information on the website [www.camp.kg](http://www.camp.kg)

environmental awareness of the population would be the most effective and available. The task of the second study was to determine the level of environmental awareness of the population of the pilot area regarding the state of the forests, their development and related needs, the understanding of the causes and consequences of the current environmental situation, and the population's willingness to change their awareness and behaviour.

Data from the two surveys were used to develop this project. For the project, the preferred survey questions were more related to natural resource management, the educational level of the target respondents, demographic information, and respondents' preferences for information. The respondents were also seen as potential stakeholders to engage in change and interaction on SLM.

Existing farmers' associations, forestry farms and pasture committees use land but when they receive subsidies from the state or another donor, there is little emphasis on supporting sustainable land management. Instead, funds are mainly designed to increase livestock numbers, while farmers' associations are focused on obtaining organic products. When considering the orientation of farmers towards organic production, it must be understood that the production of organic produce depends on the condition of the land and on its proper use and management.

There are about 454 Pasture Committee members, 41 forestry farms and there were 400,000 farms in Kyrgyzstan as of 2021 (National Statistical Committee of the Kyrgyz Republic 2021).

The project includes capacity-building activities for pasture users, the forestry sector, small plot owners and farmers through training, distribution of brochures and podcasts on sustainable land management and rehabilitation.

### **3. STAKEHOLDERS AND TARGET GROUPS**

One of the strengths of the management approach is that anyone can take part in it in some way. Many people and organisations are involved in land management (Sabaté et al. 2013). The stakeholders are as diverse as social, environmental, and political conditions on different continents. Recalling the definition of stakeholder as someone who is involved in or affected by an action, stakeholders range from the single landowner to the general public that ultimately benefits from his or her actions regarding conservation.

Overall, it can be inferred from the KAP analysis that stakeholders at the local level are also interested in holding various awareness-raising events, as such events do not take place often in their region. This is probably since it is physically difficult to bring people together. Communication through WhatsApp groups, which are used widely in these villages, publications, podcasts about SLM, and short notifications could be considered as implementation tools.

To summarize, engaging stakeholders is important in the process of combating land degradation to reach more people and involve them in understanding the importance of land conservation and the subsequent benefits to them. Therefore, outreach activities are a priority, which it is essential for stakeholders to continue working towards (Mulholland et al. 2017).

Accordingly, the education project will involve institutions, organizations, and groups at the national, provincial, district, and rural district levels, in its implementation. Table 1 summarizes the current and expected roles of the stakeholders.

**Table 1.** Involvement of stakeholders in project implementation<sup>2</sup>.

Stakeholders	Roles of stakeholders
- Ministry of Agriculture	<ul style="list-style-type: none"> <li>- The Ministry is actively involved in developing land use plans and implementing SLM demonstration projects.</li> <li>- Representatives of the legislative system will promote the adoption of amendments to the Land Code.</li> </ul>
- Local government	<ul style="list-style-type: none"> <li>- Informing the local population and participating in project trainings.</li> <li>- Assistance in the development and implementation of land use plans.</li> <li>- Ensuring coordination of all stakeholders.</li> </ul>
<ul style="list-style-type: none"> <li>- Farmers associations</li> <li>- National Pasture Users Association of Kyrgyzstan</li> <li>- Pasture users</li> <li>- Forest users</li> </ul>	<ul style="list-style-type: none"> <li>- Dissemination of project lessons learned about SLM planning, practices.</li> <li>- Participation in project training.</li> </ul>
- Local community	<ul style="list-style-type: none"> <li>- Dissemination of project lessons learned about SLM planning, practices.</li> <li>- Participation in project training.</li> </ul>
- Institute of the National Academy of Sciences of the Kyrgyz Republic	<ul style="list-style-type: none"> <li>- Involvement of specialists and scientists.</li> <li>- Consultations of specialists, such as soil scientists and others.</li> </ul>

Sustainable land management requires the joint effort of all stakeholders who directly face the consequences of degradation. Information campaigns are often more effective if they involve relevant stakeholders who live in areas at high risk of degradation. They know their region and land well. Their involvement also often increases trust and leverage.

The provision of information on SLM will enable citizens to make good choices about the consumption of natural resources. The state in this context will provide information on existing regulations concerning land use, as well as introduce monitoring mechanisms. Basic knowledge and awareness of SLM and the consequences of unsustainable land use is an important criterion for further action.

The term 'land-use planning' is often perceived as a top-down process. It should, however, not be forgotten that land users, especially farmers and pastoralists, are primary stakeholders in land-use planning. Other land users should also be involved in the planning processes, e.g., those who use forest resources, energy or mineral sources, land for settlements, industry, recreation, and tourism (FAO 2018). A process of negotiation between all stakeholders in land- or resource use planning is essential. This process includes land-use optimization modelling,

<sup>2</sup>The stakeholder table may change and be added to during project implementation.

land valuation, dialogue, consensus-building among stakeholders from different groups, and the development of regulations, laws, and other governance mechanisms.

#### **4. INTERVENTION METHODS**

Training in sustainable land management can contribute greatly to the reduction of land degradation and to participatory planning in sustainable land use. An effectively designed training programme can empower land users and increase their knowledge. CAMP Alatoo has long been involved in organising training for adult audiences, such as pasture users, local authorities, forestry, and the local community.

Public awareness-raising is also believed to contribute to the achievement of the ESD Sustainable Development Goals. The methods described below could encourage the target groups to take further action to combat land degradation and might help contribute to the goals and objectives of the UN Decade to achieve sustainable development in the country.

##### **4.1 Training for land users on the benefits of sustainable land management**

The first method of intervention is a specially designed training program that involves all stakeholders: farmers, pasture users, forest users, small landowners and the local population (Appendix I). The training aims to increase the knowledge of potential land users on SLM practices and techniques as described below.

Training sessions will be conducted over three days, including a field trip to the demonstration site. The plan is to first organize trainings in the pilot area and then, according to the results of the training, in the regional (territorial) centres. This will eventually allow coverage of all districts (territorial subdivisions of regions) of the republic.

There will be four trainers specializing in the following topics:

- Sustainable land management
- Knowledge and methods of land rehabilitation
- Soil science
- Monitoring and research on degraded sites

A participatory learning approach will be used to ensure the sustainability of skills and acquired knowledge by actively engaging participants in capacity building through interactive and experiential learning modalities.

Collaborative learning is expected. In collaborative learning, tasks, such as establishing contacts between participants (farmers, pasture users, state structures, local community), can be easily solved. During the training, the participants will share knowledge as well as learn about each other's activities.

Learning tools will include:

- Power Point presentations
- Plenary discussions
- Brainstorming sessions
- Mini lectures

- Case studies
- Working with cards
- Individual work
- Group work
- Group coaching activities

After each training, it will be possible to get feedback from the participants, which will help the trainer.

Pre-training tests will help trainers:

- To evaluate the quality and effectiveness of training
- To increase the information capacity of the content
- To identify problems that require additional information/awareness raising
- To correct training methodology;
- To adjust the study topic in consideration of the participants' wishes.

The feedback gathered at the end of each training will be used to correct or adjust the training program based on the participants' comments. In addition, feedback has the added benefit of increasing participants' confidence in the training, as it considers the opinions of the participants.

At the end of the training, participants will receive a certificate of completion and the training team will prepare a short report on the training sessions.

This component will organize trainings for land users on sustainable land management, possibly including demonstrations of degraded and partially restored plots. All this should increase the knowledge of the training participants (Table 2) and could in turn contribute to the reduction of degradation of pasture and arable land and forests as well as minimize carbon emissions to the atmosphere, which affects climate change.

**Table 2.** Learning outcomes, outputs and indicators for the training program.

<u>Learning outcomes</u> Participants can assess the condition of land in their region, know what SLM methods are suitable for restoration of the site, and take joint steps to restore the degraded area. Also, the population is aware of the consequences of land degradation.	
<u>Output I</u> Series of workshops conducted for the local community and land users on planning and promotion of knowledge on SLM, so that they can effectively manage land resources.	<u>Output II</u> Access to knowledge is the same for everyone
<u>Indicators</u> Seven training sessions conducted in seven oblasts	<u>Indicators</u> 210 people trained, including 15 women and 15 men from each area

## 4.2 Publication of brochure

A traditional form of outreach is the development and distribution of printed materials. The CAMP Alatoo study from 2019 showed that many respondents prefer to obtain information through publications, newspapers, and books. Brochures are a simple and affordable way to communicate with selected audiences. A brochure can be addressed to a specific group, such as farmers and pasture users. It can be aimed at a wider audience or directly at those involved in land farming on small plots. Accordingly, the second method of intervention will be the development and publication of an information brochure on SLM. The publication will focus on dissemination of best practices of SLM adapted to the region (Appendix II). The overall purpose of developing such a brochure is to help minimise the risks of land degradation in the region.

The publication will contain the following basic information:

- What is land degradation and its consequences
- Types of land degradation (water, wind, etc.)
- How to recognize soil fertility
- Methods of restoration using practices of other countries adapted to the region

The brochure will be developed in a language accessible for land users and will provide basic information on land degradation, including possible first steps to prevent further degradation or to restore degraded areas. This brochure will increase knowledge of further sustainable land management and restoration (Table 3).

**Table 3.** Learning outcomes, output and indicator for the brochure intervention.

<u>Learning outcomes</u>	Stakeholders will have gained information in accessible language on the concepts of land degradation, its effects, and possible first steps to prevent degradation and restore land
<u>Output</u>	A brief guide to sustainable land management in the form of a brochure has been developed and disseminated throughout the republic
<u>Indicator</u>	>40 brochures distributed in each of the seven areas

## 4.3 Creating podcasts

The third method of intervention will be the creation of a podcast series. A podcast is a form of audio mass communication. For this project, the podcast is seen as an effective tool for disseminating information to a large group of people without taking them away from their main work or other activities. The main advantage of podcasts is that they allow audiences to listen to educational content while doing other things, such as driving, exercising, or working in the yard (Vosen & Schmidt 2011).

To help disseminate information in accessible language, podcasts will be created using media centres in pilot areas through existing radio rooms and radio broadcasts. The podcasts are also



expected to increase local communities’ knowledge about land degradation and ways of restoration (Table 4).

Table 4. Learning outcomes, outputs and indicators for the podcast intervention.

<u>Learning outcomes</u> Local awareness about land degradation and ways of land restoration	
<u>Output I</u> Seven podcasts produced jointly by CAMP Alatoo and the media centres on SLM and distributed through local radio stations and media centre radio rooms	<u>Output II</u> The population is regularly informed about land degradation and land restoration measures
<u>Indicators</u> Seven podcasts per region produced	<u>Indicators</u> Once a month through radio broadcasting and once a week through radio rooms

#### 4.4 Expected impacts

The expected impacts of the above intervention methods are as follows:

- 1) Increased frequency of application of SLM approaches, not only by pasture and forest farms but also by owners of large farms and small plots, pasture committees, and the local communities in private land holdings.
- 3) Integrated land use planning as a result of training.
- 2) Improvement of land, natural resources, and soil and vegetation quality as a result of which soil erosion has been reduced, land degradation has been stopped/reversed and ecosystem service provisions been sustained.

## 5. CONCLUSIONS

Land degradation in Kyrgyzstan is a threat to social and economic life in rural areas, where agricultural land provides the main source of income. Land in Kyrgyzstan is exposed to a number of natural disasters, such as climate change, landslides, mudflows, and weed proliferation. The rapidly growing livestock population places additional stress on the land as does the use of chemicals in the fields. In this regard, this study has argued that one way to address these problems is to make people aware of the consequences of land degradation so that they can assess the current extent of degradation in order to make informed decisions on sustainable land management.

Education is necessary to protect and preserve the environment and to keep it from widespread degradation. To raise environmental awareness and knowledge, actions such as information campaigns can be undertaken, which would include a variety of thematic training, podcasts, and distribution of brochures. These can be aimed at raising public awareness of environmental

issues in general or can be targeted campaigns or educational efforts aimed at a specific sector or target audience on a specific issue.

Implementation of this project aims at disseminating knowledge and raising awareness on sustainable land management in Kyrgyzstan (Appendix V), where the following aspects are considered: equitable access to resources and information, community-based land use and management, information capacity building and involvement of all stakeholders in decision-making.

The project intends to create a bridge of knowledge between government agencies and land users. It will allow the former to notify, monitor and carryout measures for sustainable land management, while the latter will get acquainted with the principles of sustainable land use. This will be mutually beneficial for both parties. With the close cooperation of the state and land users, adjustments may be made in the development of the land code where the observance of laws in the field of land use planning will be improved and the principle of management will be based on a bottom-up approach rather than from top to bottom.

## **ACKNOWLEDGEMENTS**

I would like to express my sincere gratitude to the GRO LRT Restoration Programme for the invaluable training and experience I received during these six months.

I would like to express my gratitude to every lecturer and staff member who put their hard work and heart into the development of this unique programme.

I would like to express special gratitude to GRO LRT staff, particularly its director Sjöfn Vilhelmsdóttir, for helping and coordinating my project and for very interesting conversations and support throughout the six months of training.

My sincere gratitude to Berglind Orradóttir for an unforgettable trek to the volcanoes and for accompanying us on trips and for providing very valuable lessons and advice.

Halldóra Traustadóttir is the solution to all the fellows' problems. Thank you for your stamina and patience, for your outstanding work and efforts in providing all opportunities during our stay in Iceland. You provided every opportunity to make our six months stay in Iceland comfortable and joyful.

I would like to say my gratitude to Brita Berglund for the experience you shared with me, for your support and for our first trip with us. I am grateful for the unique journey of getting to know the land and now it is a huge love.

I would like to express gratitude to my supervisor, Íris Björk Eysteinsdóttir, who supported me throughout the writing process. Thanks to this support and the faith you gave me, I completed my project.

I would like to express my sincere thanks to the government of Iceland for giving us the opportunity to be part of this invaluable programme and for sharing successful experiences in land reclamation.

I would like to thank each of the fellows for an interesting time together. You have taught me a lot and added to my list of unforgettable experiences.

I also extend my sincere thanks to my colleagues and the CAMP Alatoo Public Foundation team for giving me this time to learn and for their support.

I am grateful to my family who believed in me and supported me throughout these months.

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## APPENDICES

### Appendix I

#### A guide to running a three-day SLM training.

The guide presents practical methods, case studies to educate land users on SLM and participatory management planning principles. Possible number of participants 12-15 (preferably from different structures, farmers, pasture users, forest users, local community, and local government structures).

#### The training has the following objectives:

- Increase the knowledge of potential land users (pasture users, farmers, local community, etc.) on SLM practices and techniques
- Introduce the existing adapted SLM practices to achieve the goals of sustainable land use, using the example of the Bazar-Korgon demonstration site
- Using the mobile application "Rangeland Monitoring" to accurately monitor and evaluate land.
- Principles of sustainable management and integrated planning.

#### The three-day step-by-step training programme:

Time	Content	Objectives	Methodological and didactic material	Notes for the trainer
<b>1st day of training</b>				
<b>Opening and introduction</b>				
9:00 9:15	<b>Opening the workshop</b> -Introducing the project. -A brief overview of the training timetable.	Official opening of the workshop by the trainers;	Flipchart: Structure and programme of the training prepared in advance on flipchart paper. Also prepare a printed programme for participants.	Ensure that participants can navigate and know the context of the training.

<p>9:15 10:00</p>	<p>Introducing participants using the "Human Bingo" method for introductions</p>	<p>Introduction participants, getting to know each other Getting to know each other; - Icebreaker; - Creating a positive atmosphere for learning.</p>	<p>A prepared «Bingo» form for the introduction of the participants (see Appendix I).</p>	<p>Participants are given forms with a certain number of squares (depending on the number of people: 3 by 3 if less than 10 people, 4 by 4 if from 10 to 16 people). For 5 minutes they move freely around the classroom, getting to know each other and communicating with as many people as possible. After a short communication, each person writes the name of the person in any square on the card. The unused squares of the table should be marked with "0". After the first part of the exercise, the participants sit in their seats. The trainer may ask what their strategy was: quantity or quality. All tables are collected and handed out again. A volunteer calls out a name from their new sheet, all the participants cross out that name from themselves, and the person called out says some interesting fact about themselves. After that, he calls out the name of anyone else on his sheet. When someone has crossed out all the names in a row or column, they shout loudly "Bingo". The trainer points out that this should be done loudly, so as to create an atmosphere in the group.</p>
<p>10:00 10:15</p>	<p>Expectation of participants from the workshop.  Content/agenda; - Presentation of the purpose of the training</p>	<p>-Assessing needs and expectations The needs and expectations of learning needs and expectations;</p>	<p>Prepare the markers cards in advance for this part. Encourage participants to group</p>	<p>Now each participant should write one expectation on a card of what they want to know or should be able to do after the training course. - Collect all the cards from the participants and go through them one by one, read them aloud, pin them on the board, ask for clarification if</p>




	<p>of the training, the main points of the programme and the time frame;</p> <ul style="list-style-type: none"> <li>- Grouping the expectations of the participants.</li> </ul>	<ul style="list-style-type: none"> <li>- Grouping the expectations of the participants' expectations</li> </ul>	<p>expectations instead of the trainer, if appropriate.</p>	<p>necessary and group them immediately. After this you should outline in a circle group of expectations, give them names, e.g., "methods", "technical content", "atmosphere".</p> <ul style="list-style-type: none"> <li>- Then go through the planned agenda (on a flipchart) and indicate where their expectations will be met during the training course or which ones will not be addressed.</li> <li>- Give them the opportunity to ask questions.</li> </ul>
<p>10:15 10:45</p>	<p>Creation of training rules by the participants themselves.</p> <p>Agreement to cooperate and work together during the training.</p>	<ul style="list-style-type: none"> <li>-Participants create their own learning environment and come to an agreement about the rules during the learning;</li> <li>- Creating a positive learning atmosphere.</li> </ul>	<p><b>Plenary discussion</b> Prepare a flip chart for visualisation</p>	<p>In creating the rules for the next three days of training, the trainer should use the experience of the past. Divide participants into three groups (depending on the number of participants, one group has 4 to 5 participants). Ask participants to recall and share bad experiences from the past (it could be from training, school, working with management, or another situation with each other in the group). Next describe the situation in one or two words (it could be I was not heard, I was not shown interest, ignored, disrespected, etc.). Ask participants to voice the cards (negative white cards). Give them five minutes to rephrase the cards into a positive word (positive cards in green). For example, disrespect - respect each other. Make sure that the cards fit the rules of the training session. Next collect all the cards and hang them on the wall. Select from them the cards that fit the rules and possibly remove the same ones. Then stick them on a single flipchart sheet. Ask each participant to sign for the rules that have been written by them. By</p>

				doing this, each participant agrees that they will follow the rules.
10:45 11:00	Coffee – break			
11:00 12:00	Introduction to Sustainable land management (SLM)	<p>Developing a common understanding on SLM.</p> <ul style="list-style-type: none"> <li>- To generate knowledge</li> <li>- To share insights and to learn from other people have experienced</li> </ul>	Prepare brief questions about SLM	<p>Through questions about SLM (ask participants how they understand sustainable management?)</p> <p>Divide the participants according to the number. The training is planned for 15 people. The trainer needs to divide the participants into three or four groups. Distribute an A3 sheet to the groups and have the groups write down what they understand SLM to be. The time limit for the task is 5 to 6 minutes. The groups write their answers or what they understand SLM to be on the sheet. In this way the trainer will determine how familiar the participants are with SLM, which will also allow the participants to reflect on the topic. Then the trainer collects the answers of the participants on one main sheet. Afterwards the trainer leads a discussion depending on the answers.</p> <p>Summary and conclusion. Discussion.</p>
12:00 13:00	Lunch time			
13:00 13:30	<p>Land potential and the basics of land assessment</p> <p>Five factors affecting land potential:</p> <ul style="list-style-type: none"> <li>-climate;</li> <li>-soil;</li> <li>- topography;</li> <li>- hydrology;</li> </ul>	<p>-To give a concept of land potential and its five factors affecting land potential.</p> <p>-Reflect on a particular topic and learn from</p>	<p>Power point presentation</p> <p>Prepare answers about the potential of the land</p>	<p>A soil expert may need to be invited to this session if the trainer is not particularly familiar with the factors affecting land potential.</p> <p>Prepare an expert in advance and tell them about the purpose of your training. Ask the invited trainer to prepare a presentation on the land potential. (Make sure the presentation is ready and meets your requirements).</p>

	- management history.	management successes and failures from history.		Then the management history will need to be discussed with the participants themselves.  What is land potential/capital? What is land potential based on? (Five factors affecting land potential: climate, soil, topography, hydrology, management history). Management history, use the knowledge of the participants themselves. In the work of the last factor, identify management mistakes and successes. Discussion
13:30 14:15	Major problems of degradation	To understand how much soil is being lost from land through erosion, and how much soil is being retained by erosion control measures so that can identify ways to improve the sustainability of land management and the subsequent benefits.	Prepare markers and cards for this session.	Work with cards. The participants know the existing problems of land degradation in their region and write on the card the causes of land degradation (participants are expected to emphasise overgrazing, use of chemical fertilisers). Next, categorise the cards.
14:15 14:50	Types of degradation			Identify with the participants the types of land degradation and the causes: - technological (as a result of long-term use) - soil erosion - salinization - waterlogging - soil pollution - desertification (40 min.)

				Discussion with the participants, question for discussion, which type of degradation is the land in their region more exposed to?
14:50 15:25	Ways and solutions to land degradation			Divide the participants into groups according to the categories of land degradation. (5 min.) Work Discussion in groups (20 min.) The participants will independently look for solutions to the problems that they think are suitable for their area. The groups present their solutions (10 min). General discussion among the participants.
15:25 16:00	Brief knowledge of the soil. Factors controlling soil fertility  - Soil parent material - Topography - Climate - Time - Living organisms	To enable participants to understand which factors have the greatest impact on soil fertility.	Power point presentation	Presentation by a guest expert (20 min). Discussion (10 min.) It is important for the participants to understand the importance of healthy soil and the economic benefits of healthy soil.  Discussion, questions.
16:00 16:10	Short coffee - break			
16:10 16:50	Presentation "Pasture Monitoring" mobile app	The mobile app "Pasture Monitoring" - is a useful assistant in the work of pasture committees and forest users. The app will help to observe and assess changes in the condition of the land in the spring before grazing and in the autumn after grazing.	Prepare a link to download the mobile app.  Power point presentation of step-by-step instructions for using the mobile app	The trainer prepares a link to download a mobile pasture monitoring application in advance. Participants are given 5 to 8 minutes to download the app.  The trainer helps the participants if they have problems downloading it. The trainer then gives step-by-step instructions in the presentation on how to use the mobile application.

		Users of the app will learn how to collect data on the vegetation cover and yield of the area being monitored and will also learn how to mark the location of the area on a map. More information on the website <a href="http://www.camp.kg">www.camp.kg</a>		Reminding them that the next day of the training the participants will be able to try out the app in practice.
16:50 17:00	Feedback. Daily evaluation.	The importance of feedback to improve the workshop; - Creating a good learning atmosphere; - Group cohesion; - Conflict management.	Prepare a daily evaluation form in advance (see Appendix 2)	- Tell the participants how to fill in the form - The main functions are observing the participants, giving you the opportunity to influence the training and to consider wishes or solve difficulties. - Ask the participants to drop the form into the specially prepared box. - Note that the form is confidential, and participants can express their opinions or make recommendations for improvement on the next training day.
<b>Day 2</b>				
<b>Visit to the Bazar-Korgon demonstration site</b>				
<b>Time</b>	<b>Content</b>	<b>Objectives</b>	<b>Methodological and didactic material</b>	<b>Notes for the trainer</b>
9:00 9:10	Daily evaluation of the previous day	The importance of feedback to improve the workshop; - Creating a good learning atmosphere; - Group cohesion;	Prepare in advance a review of the daily assessments in the evening.	- Show the results, read out comments for transparency. - Ask the participants why you are doing this and what the evaluation is used for by you as a trainer.

		- Conflict management.		
9:10 9:20	Brief background of the demonstration area	Show participants the reclaimed land in practice and familiarise them with the results of successful management	This can be either an oral or a visual presentation.	Invited guest, a participant in the restoration work of the demonstration site. Will briefly give a personal example of the history of the site.
9:20 10:30	Departure to the demonstration site.	Introduce the existing adapted SLM practices to achieve the goals of sustainable land use, using the example of the Bazar-Korgon demonstration site.	The trainer needs to prepare for the trip in advance. Negotiate with local management about the visit. Organise transport and food for the lunch break.	Demonstration site in Bazar-Korgon.  <b>Figure 1.</b> Demonstration site in Bazar – Korgon. (Source: CAMP Alatoo archive 2018).
10:30 10:40	Coffee-break			
10:40 11:40	A full survey of the site.	To show participants the difference between outside and inside the fence.		The trainer can engage the participants in discussion through questions. Ask the participants questions about what is the difference between the areas? Why the difference? What conclusions did the participants draw for themselves?
12:00 13:00	Lunch time			
13:00 14:00	Practice using the mobile application	Give a full vision in the use of the mobile app	Printed mobile application instructions	The trainer hands out the instructions and the form to the participants. The form is a paper version through which the participants will assess the changes in the condition of the

				rangeland in spring or autumn. The form will help to assess the pasture conditions in practice and also helps the trainer to assess how well the mobile app is used by the participants.
14:00 14:30	<p>The concept of sustainable land management in the SDG nexus.</p> <p>The 2030 Agenda; - The concept of sustainable development; - 3-pillars model vs. priority model</p>	<p>Developing a common understanding of sustainable development through the three pillars (economy, society, and environmental) and the policy framework.</p>	<p>Prepare a flipchart to define sustainable development; - Prepare an A4 paper with three aspects (economy, society, and environmental).</p>	<p>Triangle game (process) Ask the participants to stand in a large circle. In case the team is large, there may be a problem with the space in the room, Make sure that the game is played in a loose enough space.</p> <p><b>Rules of the game - 1st round</b></p> <ol style="list-style-type: none"> <li>1. Everyone has to choose two other contestants at random without looking at them or talking to them. It is very important that this is done in secret!</li> <li>2. Make sure that everyone chooses two people before you tell them to start the game. Now everyone should form an isosceles triangle with their partners still not talking or looking at each other. No one should know who has chosen who.</li> <li>3. the game continues until all players are equidistant from the other two, they are watching, and the movement stops - explain that this is a state of equilibrium.</li> <li>4. It may take some time for the participants to find their equilibrium. Make sure they don't give up early, keep asking if they are already in the right position, and if not, they should keep moving!</li> </ol> <p>Reflection on the 1st round of the game: Let me check, who chose person X, who chose person Y? Do a short evaluation to find out</p>

				<p>who most participants have chosen. And see if they can somehow accomplish this task.</p> <p><b>Round 2:</b></p> <ul style="list-style-type: none"> <li>- Remove one person, preferably the one chosen by the majority of the participants.</li> <li>- Ask the participants who have chosen that person (who has been eliminated) to choose someone else instead and then ask them to form the triangle again.</li> </ul> <p>Reflection on the 2nd round of the game</p> <ul style="list-style-type: none"> <li>- How did it go? Was it difficult? Why did it take you so long? Gather some answers - usually the participants say that everyone kept moving because they all connected in some way.</li> <li>- What does this show us? Direct the answers to the question of how easy it is to change the system or throw it out of balance if you remove one element.</li> <li>- Can you relate this to any other dynamic in your life?</li> <li>- Relate the 3 elements for achieving sustainability (Environment, Society, Economy), put printouts with these 3 elements on the floor and discuss real life examples and discuss the definition of 'sustainable development'.</li> <li>- Discuss what a balance might look like.</li> </ul>
14:30				
15:15				
15:15	Coffee – break			



15:25				
15:25 15:30	Daily evaluation		Prepare a daily evaluation form in advance	Distribute the daily evaluation form to the participants in advance, explain again how to fill in the form and then ask the participants to drop the form into the specially prepared box. Note that the form is confidential, and participants can express their opinions or make recommendations for improvement on the next training day.
15:30 17:00	Departure from demonstration site.			
<b>3rd day of training. Integrated planning. Training outcomes.</b>				
9:00 9:10	Daily evaluation of the previous day.		Prepare in advance a review of the daily assessments in the evening.	The trainer reads out the recommendations and comments of the previous day's evaluation.
9:10 9:40	Integrated planning	Discuss what the participants understand integrated planning to be. To highlight the different points of view of the participants on this topic	Power point presentation	Start by asking participants what their understanding of integrated planning is? (5 min.)  Presentation. Give a broad concept of integrated planning (25 min).
9:40 10:15	Existing problems in integrated planning.	Participants identify risks and benefits in co-management.	Flipchart paper, markers, cards if needed.  Group work	The trainer should divide the participants into three groups. Distribute flip charts and markers to the participants. In the task for the groups, the trainer gives 15 minutes to identify the risks and benefits for joint management. The participants should then choose one presenter to present their results (5 min/ for each group).

				General discussion with the participants (possible answers should lead the participants to the consensus among them that organisational integration will lead to more effective planning in the use of land resources (10min.).
10:15 10:25	Coffee – break			
10:25 11:00	Developing a plan for co-management	Participants learn about participatory planning in land management	Flipchart paper, markers, cards if needed.  Group work	Divide the participants into 2 or 3 groups. Invite the participants to develop a joint management plan and allow them to look ahead. What possible prospects economically the rehabilitated land will give. Distribute flipchart paper and markers to the groups. Allow 15 minutes for participants to complete the task. Invite participants to choose a presenter from the group and give them an opportunity to present their results. General discussion and possible additions.
11:00 12:00	Case study of another country. Example Iceland (1 <sup>st</sup> part)	To show participants a successful case study on land restoration using another country as an example.  In a case study, the training participants learn how to act as a “team”, analyse and make management decisions.	Power point presentation.	After the case presentation, the trainer should prepare questions for the participants. What do they think has helped Icelandic farmers to achieve such results? Why does joint planning produce such results? Is collaborative planning possible in our country? If yes, what possible results can we get? If not, why not?  Possible time for the presentation is 30 minutes. Discussion 25 minutes
12:00 13:00	Lunch time			

13:00 13:30	Case study of another country. Example Iceland (2 <sup>nd</sup> part)  Discussion			Questions and answers. Trainers need to be prepared for the questions on the case study presented. Discussion with the participants about the possibility of restoring land in their region. What measures would be taken at a particular site for further restoration?
13:00 14:00	The application of the skills learned in the future.	Participants reflect on further actions after the training. How they will apply the acquired knowledge in practice in life.	Flipcharts and markers	Ask the participants how they want to use the knowledge they have gained in the future? Give the participants time for reflection. Divide the participants into three or two groups, depending on the number of participants. Have five people in each group. Distribute flipchart paper and markers to the groups. Allocate time for the task (10 minutes). The groups need to plan for what they want to do next to restore the land or what will reduce degradation. Allow time for each group to present their next steps. Each group has 10 minutes to present their findings and 5minutes for a general discussion.
14:00 14:10	A final evaluation sheets.	Participants give feedback on the approach to the training approach, the workshop programme, the content, the work of the trainer.	Distribute copies of the evaluation sheet to participants	Evaluation sheet, participants give their recommendations on the prepared final evaluation sheet.
14:10 14:35	Three days' totals	Were the expectations of the participants from the three-day workshop justified?	Put up a flipchart with expectations from the workshop collected on day 1.	The trainer once again goes over the flipchart where the expectations of the participants on the first day of the workshop have been written. Ask the participants if all their expectations are met.

14:35	Handing out certificates			Closing remarks by the trainer and possibly the participants.
14:50	Closing the training			

## Appendix I

### «Bingo» form to introduction participant .




Is an only child	Can speak 3 languages	Plays a musical instrument	Does not like broccoli	Was born in January	Loves to swim	Is afraid of spiders
Has fainted or thrown up in public	Hates pizza	Has had stitches	Had breakfast today	Is left-handed	Has ridden horse	Likes spicy food
Drank coffee this morning	Wears socks to bed	Has 3 piercings	Bites his or her fingernail	Has more than 4 siblings	Enjoys maths	Loves to play video games
Won a contest	Hadn't have sex in last 3 years	Hasn't had breakfast today	Watches tv more than 4 hours a day	Loves to dance	Has made a youtube video	Baked a cake last month
Gotten a tattoo	Had a massage last month	Dyed hair last month	Had braces	Been to disney world	Been to 5 countries	Has never been on a plane
Read 10+ books this month	Wrote book	Played in a play	Knows how to surf	Likes pineapple on pizza	Does yoga	Has a pen pal
Appeared in a movie	Loves karaoke	Has a phobia	Collects something	Has performed in public	Never learnt how to ride bicycle	Drinks 3+ cups of coffee everyday

**The questions in the bingo grid can be changed depending on the subject of the workshop.**

**Appendix II**

**Daily evaluation form for SLM training**




**WORKSHOP EVALUATION**

			
1. Content of the seminar			
2. Formation of knowledge and development of skills			
3. The quality of facilitation			
4. Learning from others			
5. How are you feeling?			

Comments:.....  
 .....  
 .....  
 .....






**WORKSHOP EVALUATION**

			
1. Content of the seminar			
2. Formation of knowledge and development of skills			
3. The quality of facilitation			
4. Learning from others			
5. How are you feeling?			




Comments:.....  
 .....  
 .....  
 .....

**WORKSHOP EVALUATION**

			
1. Content of the seminar			
2. Formation of knowledge and development of skills			
3. The quality of facilitation			
4. Learning from others			
5. How are you feeling?			

Comments:.....  
 .....  
 .....  
 .....

**WORKSHOP EVALUATION**

			
1. Content of the seminar			
2. Formation of knowledge and development of skills			
3. The quality of facilitation			
4. Learning from others			
5. How are you feeling?			

Comments:.....  
 .....  
 .....  
 .....

## Appendix III

### Final evaluation form

Your opinion is important to us. It will help us improve future activities/training courses. Please take your time to evaluate and share with us any additional comments, observations, or criticisms you may have.

<b>Title of the workshop:</b>	
<b>Date:</b>	<b>Name of trainer(s):</b>

Please rate your **level of satisfaction** with the training course:  
Please tick "1" if you are **completely dissatisfied** with the training; "2" if the training should be improved; "3" if you are **satisfied** and "4" if you are **very satisfied** with the training.

	1	2	3	4
Were the expectations you had at the beginning of the training met?				
Can you apply/use what you have learned in the training at your workplace?				
Were you able to deepen your knowledge and/or skills on the topic/course content?				
Are you satisfied with the teaching/educational methods (practical + group work, practical exercises, discussion)?				
Have you learned anything from the other participants?				
Did you like the learning atmosphere in general?				
Were you satisfied with time management during the training?				
Are you satisfied with the learning materials (handouts, presentations)?				
Are you satisfied with the logistics (organisation of the event, information provided, training room, breaks, etc.)?				

Please give your opinion by putting (x) below in the boxes:

Was the duration of the course adequate? The course ...	<b>Too long:</b>	<b>The normal:</b>	<b>Too short:</b>
Will you be attending a future course where the subject will be taught in depth?	<b>Yes:</b>	<b>No:</b>	
Would you recommend this course to your colleagues?	<b>Yes:</b>	<b>No:</b>	

*Do you have any further comments or suggestions? What was good? What needs to be improved?*


Thank you!

## Appendix II

### Plan to write a brochure on Sustainable Land Management

Title of the brochure: **Sustainable land management practices.**

**Purpose of the brochure:** To convey to the reader the importance of land conservation, land restoration makes both economic sense and has social and environmental benefits (ELD, 2019). The brochure will be tailored to the territorial division and climate of the areas. Methods and tools for rehabilitation of degraded land will also be outlined. For farmers, pasture users, and other target groups directly related to agriculture and can be used by them as an educational and informative tool.

The brochure will consist of introduction, main part, and conclusion. Below is a brief outline of the brochure.

#### 1. Introduction

The introduction will provide information and an overview of the state of research on SLM. With a list of international agreements adopted to promote knowledge and close sustainable land management in Kyrgyzstan.

#### 2. The main part

2.1 What is land degradation and its consequences.

2.2 Types of degradation and how to determine which type of degradation applies to an area or land in different regions of Kyrgyzstan (for further restoration).

2.3 Methods to determine the extent of land degradation and causes.

2.4 How to determine soil fertility

2.5 Restoration methods using practices of other countries adapted to a particular region.

2.6 Sustainable land management practices.

#### 3. Conclusion

#### 4. List of references



## **Appendix III**

### **Plan to develop podcasts on sustainable land management**

**Purpose of the podcasts:** To communicate the importance of land conservation without disconnecting them from their main work.

**Target group:** farmers, pasture users and the local community, other stakeholders.

**Format:** Audio

**Podcast script:** consistent with project objectives, information on SLM, SLM techniques.

**Dissemination:** Social Media, YouTube, Facebook and messengers WhatsApp, Telegram, etc.

#### **The first stage of creating a podcast:**

1. The test podcast will be recorded in two stages, the first quick and the second smooth. In the first podcast, we will outline the concept and launch the described format.
2. Collect feedback from the audience, refine the script and restart again and distribute to sources.

#### **Second stage of creation:**

For the second stage, it is planned to involve media centres with which CAMP Alatoo PF cooperates, as well as podcast heroes may be participants in trainings, farmers who have successful experience in land restoration.

There was also a suggestion after the project presentation to create a podcast platform between the fellows, where each country would share its successful experience in land restoration.

**Appendix IV**

## Operational plan of activities

	<b>Activities</b>	<b>Description</b>	<b>Timeline</b>
<b>Component 1: 1. Trainings for land users on the benefits of sustainable land management</b>			
1.1	Development of a three-days training programme	Developed a step-by-step three-day on-site training program. The training program is scheduled by hours, which includes interactive methods of training, including participatory methods.	September 2022
1.2	Implementation of trainings	The first training will be conducted in Jalal-Abad oblast to improve the knowledge of local land users.  In the second year, trainings, adjusted/improved based on the experience of the first year, will be conducted throughout the Republic	June 2023 - September 2023
<b>Component 2: Development of a brochure for land users</b>			
2.1	Brochure development	The brochure will be designed with the territorial division and climate of the regions in mind. Methods and tools for rehabilitation of degraded land will also be outlined.	January – April 2023
2.2	Brochure printing	The brochure will be distributed only to the participants of the training. The knowledge gained will be reinforced by the brochure	June 2023
<b>Component 3: 3. Creating and distributing podcasts through Media Centres</b>			
3.1	Developing a podcast	The format and script of the podcasts have been chosen, which corresponds to the goals of the project. There will be two stages, the first fast and the second smooth.  In the first launch we came up with the concept, described the format and launched it. Collected feedback from the audience, refined the script and launched again.  Then, after approbation, we move on to the second stage, where we can involve podcast heroes.	From one week to one month 2023

3.2	Podcast distribution	Podcasts are distributed through social networks such as WhatsApp, Facebook, and messengers.	1x per month
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