

CONCEPT OF A LANDSCAPE MANAGEMENT APPROACH

VIZUALIZED BY THE CLIMATE RESILIENT DEVELOPMENT PROJECT



1. GLACIER MELT

Melting glaciers are a serious and growing concern in Tajikistan, with potentially severe consequences for water security, agriculture, energy production, and disaster risk across the country.

2. GLACIAL LAKE OUTBURST FLOODS

These sudden and catastrophic releases of water from glacial lakes, usually caused by the failure of natural dams made of ice or stone, often triggered by events like landslides, icefalls or rapid melting. Due to the melting in Tajikistan's glaciers GLOFs are becoming a more prominent problem every day.

3. ROCKFALL & LANDSLIDES

They remain a prominent problem in Tajikistan due to its mountainous terrain, destroying infrastructure and endangering people's lives.

4. AFFORESTATION AREA

Replanting saxaul and other native species, such as juniper and the Bukhara almond, helps reduce wind erosion, combat desertification, and stabilize the ecosystem.

5. SOLAR POWERED PUMPING SYSTEM

Agriculture in Tajikistan relies heavily on gravity-fed irrigation systems, which are often overused. Solar-powered pumps present a sustainable and cost-effective alternative.

6. PHOTOVOLTAIC SYSTEM

Solar panels offer significant climate benefits by reducing greenhouse gas emissions and lowering the overall carbon footprint. Tajikistan relies heavily on hydropower, but with water resources expected to decline in the future, solar energy is becoming increasingly important as one of the most accessible forms of renewable energy.

7. DRIP IRRIGATION FOR ORCHARDS AND CROPS

Drip irrigation significantly improves water efficiency compared to traditional methods, reducing pressure on water sources and increasing water availability for farmers in arid regions.

8. OBSERVATION PLATFORM

This multi-purpose tower serves both as a tourist attraction and a source of income, while also functioning as an early warning system for potential hazards such as forest fires, landslides, and mudflows.

9. EARLY WARNING SYSTEMS

Early warning systems are part of disaster risk mitigation systems, designed to detect natural hazards and rapidly communicating alerts to at-risk communities and authorities, allowing timely action to reduce harm and save lives.

10. GREENHOUSES

Greenhouses help mitigate the effects of climate change by improving energy efficiency, reducing water waste, and contributing to local cooling.

9. ORCHARD ADAPTATION TO CLIMATE CHANGE

Orchard adaptation provides numerous benefits, including increased resilience to extreme weather, improved yields, and enhanced biodiversity.

10. TREE NURSERY WITH SOLAR FENCE

Tree nurseries contribute to reforestation and land restoration, protecting communities from erosion while creating job opportunities through the sale of fruit, timber, and seedlings.

11. PROTECTIVE NET FOR FIELDS

Protective nets can shield against heat filter solar radiation protecting crops from sunburns or heat stress.

12. PRODUCTION OF FIRE BRIQUETTES WITH PISTACCHIO SHELLS

They are a cheaper alternative to traditional briquettes and can help to reduce deforestation, while generating income and creating jobs for local communities.

13. DOMESTIC AND WILD BEEKEEPING

Beekeeping is adaptable to various climates and can be practiced in arid, mountainous and forested regions. It also generates income and jobs for local communities while conserving biodiversity.