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The multiple benefits of springshed management as a Nature-based Solution

Springshed management is an integrated approach to protect and maintain the hydrogeological system that sustains springs. It involves managing the sources – the springs – and also the 'recharge area', through which water infiltrates and reaches the aquifers, where groundwater is stored and emerges at the surface as a spring. Springshed management ensures sustainable management of water and land resources, promotes water security and, while doing so, fosters ecosystem restoration, climate adaptation, inclusive governance, and wider stakeholder partnerships.

Addressing water insecurity in the mountains

Springshed management:

Conserves water resources

Enhances groundwater recharge, revives springs, supports in maintaining water balance, and increases baseflows[1].

Improves water security

Increased baseflows and spring flows, ensuring year-round water availability for household use, livestock, and minor irrigation.

Facilitates effective water governance

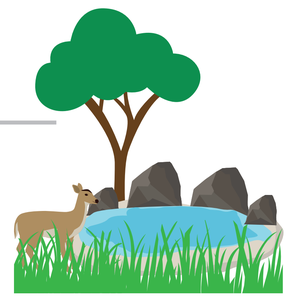
Ensures fair and equitable water distribution and use, participatory decision making, and gender equality and social inclusion(GESI).

Maintains water quality and environmental flows[2]

Supports water regulation as well as cultural services, and sustains freshwater ecosystems.

Supports inclusive governance

Institutional capacity and ownership, women's empowerment and leadership in water management, equitable personal development opportunities, and participatory decision making.



Supports biodiversity conservation

Greening of catchments, enrichment planting with preferred medicinal and aromatic plants, restoration of aquatic and riparian habitats, increases water availability for wildlife, improves soil moisture regime and soil biodiversity, and supports pollinators.

Provides opportunity for adaptive management and mainstreaming

Integration of various approaches, incorporating lessons and feedback into management, water use decisions based on availability, soil erosion management, forest and land management.

Multiple benefits and co-benefits for biodiversity and climate change

Promotes effective institutional capacity development

Co-learning opportunities, bridging science with local knowledge and action, proactive community engagement, creating a cadre of local resource persons, and encourages stewardship.

Builds socio-economic resilience and manages trade offs

Reduces water drudgery, creates opportunities for crop diversification, home garden and livestock management, improves outcomes for water, sanitation and hygiene (WASH), cuts water purchasing expenses, reduce distress migration, creates economic opportunities around restoration, revival and water management.

Enhances government engagement and leadership

Water as people's agenda, spring revival integrated into local government plans and budgetary outlay, driving autonomous water security and climate adaptation agenda, implementing Local Adaptation Plan of Action (LAPA), and supports cross-watershed cooperation.

[1] Baseflow is the flow of water that seeps into streams through delayed subsurface pathways; it helps to keep water flowing in streams and rivers between precipitation events, and even during extended periods of severe drought.
[2] Environmental flows describe the quantity, timing, and quality of water flows required to sustain freshwater and estuarine ecosystems and the human livelihoods and well being that depend on these ecosystems.

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