



Strengthening Information Sharing on GCF and Readiness Project and Field Assessment of Environmental and Community Issues in Gangtey-Phobji



May 2026

Field	Details
Title	Workshop on Strengthening Information Sharing on GCF and Readiness Project
Organizer/Institution	Royal Society for Protection of Nature (RSPN)
Venue	Gangtey-Phobji Gewog including Tabading (Phobjikha), Tawa, Bayta, Santana (Gangtey Gewog), and Jarogang (Athang Gewog)
Period	May 21 – May 24, 2026
Objectives and Expected Outcomes	To identify, verify, and discuss key environmental, agricultural, and waste management issues affecting the Gangtey-Phobji Ramsar Site; to formulate actionable interventions; and to assess critical water source depletion through comprehensive field observations.

SECTION B: Background

1.Introduction

The Royal Society for Protection of Nature (RSPN), serving as a delivery partner under the Green Climate Fund (GCF) Readiness Project, organized a stakeholder workshop on 1 June 2026 in Thimphu focusing on strengthening information sharing related to GCF requirements and ongoing readiness activities. The workshop was conducted as part of the approved activity on “Strengthened Information Sharing” under the readiness support programme.

The primary aim of the workshop was to enhance awareness, improve coordination, and build a common understanding among local government officials, community representatives, and relevant stakeholders on GCF processes, requirements, and the ongoing concept note development activities.

The Gangtey-Phobji landscape, a designated Ramsar Site, holds profound ecological significance as a vital wetland ecosystem and the primary wintering habitat for the globally threatened Black-necked Crane. In recent years, the region has faced compounding environmental and developmental challenges driven by climate change, expanding tourism, and localized agricultural practices. Recognizing the urgency of these threats, the Royal Society for Protection of Nature (RSPN) organized a comprehensive stakeholder consultation and field assessment program. This initiative was critical for diagnosing the intersectional issues of water scarcity, unsustainable agricultural practices, and inadequate waste management that threaten both the wetland biodiversity and the socio-economic resilience of local communities. The engagement of regional administrative heads, agricultural officers, community representatives, and field observations directly contributes to the formulation of an evidence-based, climate-resilient framework for the Gangtey-Phobji region.

2.Objectives and Outcomes

The primary purpose of this assessment and consultation program was to systematically identify, verify, and deliberate on the prevailing environmental and community-level challenges within the Gangtey-Phobji Gewogs. The program aimed to assess the severity of water source depletion, evaluate the ecological impacts of current agricultural practices, and analyze the operational constraints of the existing waste management infrastructure.

The expected outcomes of the mission included:

1. Strengthen understanding of GCF policies, procedures, and funding requirements.
2. Share progress on the ongoing development of the Concept Note under the Readiness Project.
3. Facilitate dialogue among stakeholders on priority issues related to climate change adaptation.
4. Generation of baseline qualitative data regarding the status of springsheds, waste facilities, and soil degradation.
5. Development of consensus-based, actionable recommendations for watershed management, Climate-Smart Agriculture (CSA), and sustainable waste disposal.
6. Formulation of a strategic "way forward" to secure requisite technical and financial support from donor organizations, the Department of Forests and Park Services (DoFPS), and local district administrations.

3. Rationale and Description of Day-wise Program

Day 1: Theme: Stakeholder Consultation on Environmental Challenges and Preliminary Site Visits

Key Takeaways:

- **Water Depletion Vulnerability:** Out of approximately 195 local water sources, nearly 70 are drying due to climate change, irregular rainfall, and poor infrastructure planning, posing severe threats to the wetland ecosystem and local livelihoods.
- **Agricultural Transition Needs:** Excessive reliance on chemical fertilizers and monocropping (particularly potatoes) has degraded soil health, necessitating an urgent shift toward Climate-Smart Agriculture (CSA), improved manure management, and robust Public-Private Partnerships (e.g., with Nob Bhutan).
- **Waste Management Deficits:** The existing waste management infrastructure governed by GPEMC is over-capacitated, with one landfill already full and the other undersized. Poor segregation, exacerbated by rising tourism, poses leakage risks into the Ramsar wetlands.
- **Physical Landscape Degradation:** Field assessments at Bayta and Santana villages revealed visible signs of soil erosion and gully formation, indicating an urgent need for watershed restoration and soil conservation interventions.

Summary of Proceedings

The program commenced at Tabading, Phobjikha, with welcoming remarks from the Director of RSPN. The consultation adopted a multi-stakeholder participatory approach, engaging the Gups and Mangmis of two gewogs, two Gewog Agriculture Officers, a representative from the Desuup volunteer fraternity, a Community Learning Center (CLC) representative, and local villagers. Discussions centered around three thematic areas: water resources, agriculture, and waste management. Stakeholders highlighted an alarming rate of springshed degradation, compounded by a lack of technical capacity for source revival and inaccurate hydrological data. On agriculture, participants acknowledged the detrimental impacts of agro-chemicals on the wetland and proposed interventions such as crop rotation, quality certification, and traceability mechanisms. Addressing waste management, the forum noted severe institutional constraints, advocating for private sector involvement and Payment for Ecosystem Services (PES) mechanisms. Following the consultation, the RSPN team conducted evening field visits to the local waste landfill site to verify capacity constraints. Subsequently, the team visited Bayta and Santana villages in Gangtey Gewog, where severe river-induced gully formations were observed, physically validating the soil erosion concerns raised during the meeting.

Day 2: Theme: Field Assessment of Critical Water Sources in Phobjikha Gewog

Key Takeaways:

1. **Severe Localized Water Scarcity:** Direct observation in Tawa village confirmed that vital water sources are depleting rapidly, directly affecting the domestic and agricultural security of the dependent population.
2. **Impact on Human Settlements:** Out of two major water sources previously supporting approximately 80 households in the area, one has dried up completely, creating a critical resource deficit.
3. **Urgency for Technical Interventions:** The physical state of the dried source highlights the pressing need for scientific springshed assessments, afforestation in recharge areas, and restriction of obstructive cement infrastructure near water pathways.

Summary of Proceedings

To ground-truth the hydrological concerns raised during the Day 1 consultations, the RSPN assessment team traveled to Tawa village within Phobjikha Gewog. The day was dedicated to physically inspecting the local springshed systems and evaluating the severity of water source depletion. The team surveyed two major water sources that sustained nearly 80 households in the vicinity. The assessment revealed a highly critical situation: one of the two primary sources had completely dried up. Discussions with local residents during the site visit corroborated that declining rainfall and shifting climatic patterns have drastically reduced groundwater recharge. The team documented the infrastructural and environmental context of the dried source, noting that without immediate ecological restoration, scientific monitoring, and community-led watershed management, the remaining active sources are at extreme risk of identical failure.

Day 3: Theme: Assessment of Water Source Depletion in Jarogang, Athang

Key Takeaways:

1. Need for Broad-scale Mapping: Observations confirm the necessity for comprehensive, landscape-level water source mapping and seasonal monitoring across all adjacent gewogs.
2. Concrete Infrastructural Gap: The supply of water for both drinking and irrigation at Jarogang village is hindered by the lack of a proper infrastructure distributing the water.

Summary of Proceedings

On the final day, the RSPN team expanded the geographical scope of the assessment by traveling to Jarogang village, located under Athang Gewog. The primary objective was to investigate whether the proposed water issues persisted by assessing at the source. A thorough physical inspection of the village's primary water sources was conducted. The team observed that the water issues at Jarogang village is not of availability but accessibility hindered by poor infrastructure building. The water source of Jarogang village supports 17 households and it is an integrated water source that supports both drinking and irrigation.

4. Lessons Learnt

The three-day consultation and field assessment yielded several critical insights. Institutionally, there is a clear mandate to strengthen community-level management bodies. The GPEMC, currently overseeing waste management, is hindered by limited manpower and competing responsibilities, underscoring the potential benefit of privatizing specific waste operations and introducing fee-based or PES models. Technically, local communities and stakeholders suffer from a profound lack of scientific capacity regarding springshed revival and sustainable land management. Interventions must move beyond theoretical advice to practical, seasonal hydrological mapping and the implementation of Good Agricultural Practices (GAP). Environmentally, the visual evidence of gully formations in Gangtey Gewog and the total desiccation of water sources in Tawa village serve as stark indicators of an accelerating climate and ecological crisis. Preventative measures—such as strict environmental assessments prior to cementing near water sources and prioritizing afforestation in recharge areas like Lawala—are mandatory. Economically, sustainable transitions require market assurance. Farmers cannot pivot from chemical-heavy potato monocropping without robust Public-Private Partnerships, product certification, and facilitated market linkages guaranteeing procurement from local tourism establishments.

5. Conclusion

The stakeholder consultation and subsequent field assessments in Gangtey-Phobji and Athang Gewogs successfully validated the complex, interrelated challenges threatening this ecologically sensitive Ramsar Site. The interactive dialogue and physical verifications clearly demonstrated that water source depletion, soil degradation, and waste mismanagement are approaching critical thresholds. Addressing these issues requires immediate, coordinated action involving technical capacity building, ecological restoration, and policy support to integrate sustainable livelihoods with wetland conservation. Moving forward, while RSPN is deeply committed to facilitating this transition, the sheer scale of the required interventions dictates that substantial donor funding must be secured. Furthermore, the successful implementation of these long-term environmental safeguards will necessitate unwavering technical and administrative support from the Department of Forests and Park Services (DoFPS) and the local District Administration.



Preliminary Site Visit (Gangtey Phobji landfill)



Field Assessment of Critical Water Sources in Tawa village, Phobjikha Gewog

Group Presentation Summary:

Group 1: Water Depletion Vulnerability:

1. Watershed Management

The proposed interventions focus on understanding and restoring watershed conditions through:

- Rapid assessment and classification of sub-watersheds into pristine, normal, degraded, and critical categories.
- Development of targeted interventions based on watershed conditions.
- Conservation of natural water bodies such as ponds, marshes, lakes, and water reserves.
- Establishment and integration of weather stations to improve climate monitoring and support water recharge planning.

2. Springshed Management

To address declining water sources and improve water availability, the group recommends:

- Reassessment and validation of drying water sources.
- Hydrogeological mapping of selected springsheds and identification of groundwater recharge areas.
- Exploration and mapping of groundwater resources.
- Implementation of strategic interventions based on scientific assessments, including sustainable land management and nature-based solutions.
- Construction of water reservoirs near source areas while ensuring environmental safeguards and minimizing impacts on wildlife.
- Improvement of Rural Water Supply Schemes (RWSS) through infrastructure support.
- Establishment of hydrological monitoring systems to track rainfall and temperature trends.

3. Wetland Management

The wetland management component aims to strengthen ecosystem resilience through:

- Assessment of soil, water, and vegetation conditions.
- Management of encroaching woody plant species.
- Monitoring of wetland hydrology and water quality using chemical and biological indicators.
- Assessment of wetland carbon sequestration potential.
- Capacity building for local institutions and stakeholders.
- Implementation of soil erosion control measures such as check dams and plantation activities in landslide-prone areas.
- Introduction of Payment for Ecosystem Services (PES) mechanisms to support long-term sustainability of conservation efforts.

4. Community Participation and Awareness

Recognizing the importance of local stewardship, the strategy proposes:

- Formation of Water User Associations to support community-based water management.
- Active involvement of local communities in planning, management, and decision-making related to springsheds and wetlands.
- Strengthening awareness and ownership of water resources and ecosystem conservation.

Expected Outcomes

The proposed interventions are expected to:

- Improve watershed and springshed health.
- Enhance water availability and security.
- Strengthen climate resilience of local communities.
- Conserve wetlands and biodiversity.
- Reduce soil erosion and land degradation.
- Generate sustainable financing mechanisms for ecosystem management.
- Promote community-led stewardship of natural resources.

Group 2: Agricultural Transition Needs:

The group identified two major challenges affecting sustainable agriculture in Gangtey and Phobji: **agricultural land degradation** and **inadequate market and enterprise development**. A set of interventions, targets, timelines, and responsible agencies were proposed to address these challenges.

1. Addressing Agricultural Land Degradation

The group proposed a comprehensive land and soil management approach, including:

- Awareness and advocacy programs on soil health and land degradation for all landholders in Gangtey and Phobji.
- Promotion of Sustainable Land Management practices across 300 acres.
- Soil and water quality testing before and after project implementation to monitor impacts.
- Hands-on training on bio-fertilizers and organic soil amendments.
- Improvement of drainage systems along farm roads and agricultural lands (30 km).
- Stream bank protection at six vulnerable sites using bioengineering and civil engineering measures.
- Crop diversification through demonstration of climate-resilient varieties such as wheat and barley.
- Support for 200 polyhouses through cost-sharing arrangements.
- Development of 100 acres of pastureland.

- Development of 100 acres of pastureland.
- Introduction of 100 improved Jersey cattle breeds through cost-sharing mechanisms.
- Promotion of climate-resilient and quality potato seed production through Community Learning Centres and the National Seed Centre.

2. Strengthening Market and Enterprise Development

To improve livelihoods and create economic opportunities, the group recommended:

- Conducting a baseline study on enterprises, community governance, and public-private partnerships.
- Providing entrepreneurship and enterprise development training for youth, coupled with start-up support, access to finance, value-addition equipment, and business mentoring.
- Piloting a potato branding initiative, with potential for scaling up based on results.
- Developing a climate-resilient economic strategy to support sustainable rural enterprises and market development.

Expected Outcomes

The proposed interventions aim to:

- Improve soil health and agricultural productivity.
- Enhance climate resilience of farming systems.
- Reduce land degradation and erosion.
- Increase adoption of sustainable agricultural practices.
- Strengthen market access and value addition for agricultural products.
- Create employment and entrepreneurship opportunities, particularly for youth.
- Improve food security and rural livelihoods in Gangtey and Phobji.

Key Stakeholders

Implementation will involve collaboration among:

- Wangduephodrang Dzongkhag Agriculture and Livestock Sectors
- Department of Agricultural Marketing and Cooperatives (DAMC)
- National Soil Services Centre (NSSC)
- National Centre for Organic Agriculture (NCOA)
- Agricultural Research and Development Centre (ARDC), Bajo
- National Seed Centre (NSC)
- Gewog Administrations
- The Royal Society for Protection of Nature (RSPN) and other partners.
- Waste Management Deficits: The existing waste management infrastructure governed by GPEMC is over-capacitated, with one landfill already full and the other undersized. Poor segregation, exacerbated by rising tourism, poses leakage risks into the Ramsar wetlands.
- Physical Landscape Degradation: Field assessments at Bayta and Santana villages revealed visible signs of soil erosion and gully formation, indicating an urgent need for watershed restoration and soil conservation interventions.

Group 3: Waste Management

The meeting discussed strategies to strengthen waste management systems in Gangtey-Phobjikha with a focus on enhancing ecosystem health, climate resilience, and community well-being. Participants reviewed sustainable financing options, infrastructure requirements, community engagement mechanisms, and capacity-building interventions necessary for effective waste management.

1. Sustainable Financing Mechanisms

The meeting emphasized the need for a long-term and self-sustaining financing framework for waste management operations. Key recommendations included:

- Introduction of a diversified fee-based collection system, including household levies and contributions from hotels and tourism establishments.
- Promotion of Public-Private Partnerships (PPP) for waste collection, transportation, recycling operations, and maintenance services, while creating employment opportunities for local youth.
- Development of climate-resilient financing mechanisms through circular economy initiatives, including revenue generation from compost production, recycled materials, and resource recovery activities.

2. Climate-Adaptive Infrastructure Development

Participants discussed the establishment of climate-resilient waste management infrastructure.

Composting Facility

- Construction of an elevated composting facility to withstand seasonal flooding.
- Installation of drainage systems capable of handling extreme rainfall events.
- Development of weatherproof structures to regulate moisture and temperature.
- Exploration of biogas plant integration for organic waste management.

Material Recovery Facility (MRF)

- Establishment of an enclosed sorting and segregation facility.
- Incorporation of rainwater harvesting and solar-powered equipment.
- Provision of worker safety measures for extreme weather conditions.
- Segregation of waste into organic, recyclable, hazardous, and construction waste streams.
- Installation of conveyor belts and baler machines to improve recycling efficiency.

Waste Collection and Transportation

- Procurement of two dump trucks with capacities ranging from 5–10 metric tons.
- Adoption of collection schedules based on waste generation patterns, including daily collection for hotels and regular household collection.
- Integration of climate-resilient route planning and GPS-based route optimization.

Engineered Sanitary Landfill

- Identification of geologically stable sites located away from settlements and wetlands.
- Incorporation of leachate treatment systems, methane capture facilities, and liner systems to prevent environmental contamination.
- Planning for a 20–30 year operational lifespan with progressive closure and ecosystem restoration measures.

Sewage Management

- Establishment of a communal sewage management system (DEWATS).
- Connection of sewage networks to septic tank systems.
- Collaboration with Bhutan Toilet Organization for technical support and implementation.

Monitoring and Evaluation Systems

- Installation of water quality monitoring wells.
- Regular monitoring of wetland ecosystem health.
- Conducting periodic waste composition surveys.
- Tracking greenhouse gas emissions and equipment performance.

3. Behavioral Change and Capacity Building

The meeting recognized that infrastructure investments must be complemented by community awareness and behavior change initiatives.

Awareness and Education Programs

- Implementation of targeted awareness campaigns for households, schools, tourism operators, local governments, and farmers.
- Organization of community workshops and educational programs in schools.
- Development of visual awareness materials and tourism-focused engagement initiatives.
- Promotion of hotel staff training and green certification pathways.

Capacity Building Initiatives

- Training households on waste segregation, composting techniques, recycling practices, hygiene, and safety measures.
- Strengthening leadership and community mobilization efforts.
- Building capacities of Gewog and Thromde officials, health workers, and relevant stakeholders on monitoring, enforcement, environmental compliance, data management, budgeting, and integration with climate action plans.
- Conducting quarterly refresher training programs.

Incentive-Based Behavior Change

- Introduction of community recognition schemes and awards for exemplary waste management practices.
- Provision of incentives such as vouchers and public recognition.
- Promotion of socio-cultural integration of waste management practices.
- Strengthening women's participation and youth engagement in waste management initiatives.

Conclusion

The meeting concluded that an integrated approach combining sustainable financing, climate-resilient infrastructure, effective sewage and landfill management, community awareness, and institutional capacity building is essential for enhancing ecosystem and community resilience in Gangtey-Phobjikha. Participants agreed on the importance of collaborative implementation involving local communities, government agencies, private sector partners, and development organizations to ensure long-term sustainability and environmental protection.



