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United Nations Development Programme

Project Document
UNDP Pakistan

Project Title: *Enhancing Climate Adaptive Resilience and Economic Recovery through Early Warning Systems, Women's Empowerment, and Sustainable Energy Solutions in Pakistan (ECARE- Program)*
Project Number: 01004421
Implementing Partner: United Nations Development Programme
Start Date: 1st March 2025 **End Date:** 29 February 2028 **LPAC Meeting date:** 21 May 2025

Brief Description

Pakistan faces intersecting crises of climate-induced disasters, economic instability, and energy insecurity, disproportionately affecting vulnerable populations. The 2022 floods, which impacted over 33 million people and caused nearly USD 30 billion in damages, underscore the urgent need for integrated, resilient solutions.
This project addresses these challenges through a transformative, multi-sectoral approach. It is structured around three interlinked outcomes:

1. **Tailored Intelligence for Actionable Early Warning Systems (TIAEWS):** Enhanced capacity of communities and institutions to anticipate and act on disaster risks through data-driven and digitally-enabled inclusive early warning systems.
2. **Women's Economic Empowerment for Inclusive Recovery and Resilience:** Strengthened livelihoods, financial inclusion, and market access for women and marginalised groups, positioning them as leaders in driving inclusive economic recovery, climate-smart enterprise, and community resilience.
3. **Renewable Energy and Agricultural Transtitions for Community Resilience:** Increased and accelerated women-led and community-based adoption of decentralised renewable energy and climate-smart agriculture to enhance productivity, sustainability, and resilience

The project document is the umbrella program, which will serve as the key program for projects and the initiative focusing on enhancing climate resilience through EWS and economic Inclusive recovery, gender empowerment and providing solutions to the energy crisis in Pakistan by transitioning coal with renewable energy options/alternatives. An initial USD 4 million has been secured from the Government of China (CIDCA) for Outcome 1. The ECARE programme will adopt a **phased financing model**, enabling additional energy and economic empowerment projects to be integrated as funding becomes available. Future resource mobilisation will target bilateral and multilateral donors, the private sector, and international financial institutions. The project will contribute to Pakistan's national development priorities and international frameworks, including the **SDGs**—notably **SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 11 (Sustainable Cities and Communities), and SDG 13 (Climate Action)**—and the **Sendai Framework for Disaster Risk Reduction**. The umbrella program will promote innovation, inclusivity, and financial sustainability, aiming to enhance adaptive capacity and build long-term resilience across high-risk communities in Pakistan.

Contributing Outcome (UNSDCF, CPD, RPD):
CPD outlines UNDP's goal of strengthening the capacity of countries, institutions, and individuals to prevent, mitigate, and respond to a range of risks and crises, including those arising from conflict, natural hazards, climate events, and social and economic shocks.

UNSDCF Contributing Outcome involving UNDP 3:
By 2027, people living in the Indus River Basin, particularly the most vulnerable, including women, girls, boys, persons with special needs and senior citizens, will have their lives positively impacted by improved water access and utilization, economic development, livelihoods, climate-resilient settlements, and prosperity.

CPD Outputs 3.2:

Total resources required:	**21.64 million USD**	
Total resources allocated:		
	UNDP TRAC:	
	Donor Funds available: Government of China (GDF) funded	**3,975,010 USD**
	Non-Funded	**17,670,750 million USD**
	Government:	
	In-Kind:	

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Output 3.2. Efficient and sustainable use of fresh marine and terrestrial ecosystems, including the Indus Basin, for resilient communities through interventions for improved health, livelihoods, green economy and clean energy ***Indicative Outcome(s) with gender marker[1]:*** **Outcom 1:** Tailored Intelligence for Actionable Early Warning Systems (TIAEWS): Enhanced capacity of communities and institutions to anticipate and act on disaster risks through data-driven and digitally-enabled inclusive early warning systems: GEN2 **Outcome 2:** Women's Economic Empowerment for Inclusive Recovery and Resilience: Strengthened livelihoods, financial inclusion, and market access for women and marginalised groups, positioning them as leaders in driving inclusive economic recovery, climate-smart enterprise, and community resilience: GEN3 **Outcome 3:** Renewable Energy and Agricultural Transtitions for Community Resilience: Increased and accelerated women-led and community-based adoption of decentralised renewable energy and climate-smart agriculture to enhance productivity, sustainability, and resilience: GEN2			

Agreed by (signatures)[2]:

UNDP
DocuSigned by: Van Nguyen 6D879D9AF3DC425... Van Nguyen, Deputy Resident Representative, UNDP
Date: 27-May-2025

[1] The Gender Marker measures how much a project invests in gender equality and women's empowerment. Select one for each output: GEN3 (Gender equality as a principle objective); GEN2 (Gender equality as a significant objective); GEN1 (Limited contribution to gender equality); GEN0 (No contribution to gender quality)

[2] Note: Adjust signatures as needed

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I. DEVELOPMENT CHALLENGE

Pakistan is navigating an increasingly complex development landscape shaped by the convergence of climate vulnerability, socio-economic fragility, and institutional constraints. The 2022 floods — one of the most severe climate events in the country's history — affected over 33 million people, caused nearly USD 30 billion in damages, and pushed an estimated 9 million people into poverty. These losses were not isolated shocks, but a manifestation of underlying systemic fragilities across critical sectors: disaster preparedness, agricultural and water systems, energy access, and inclusive governance.

The country's exposure to climate hazards is among the highest globally. With its geographic and ecological diversity, Pakistan faces multiple climate-induced risks including glacial lake outburst floods (GLOFs), heatwaves, flash floods, droughts, and sea-level rise. The increasing frequency and severity of such events, combined with high population exposure and low adaptive capacity, has eroded resilience at both the community and systems level. These challenges are particularly acute in underserved and hazard-prone regions such as Balochistan, Sindh, Khyber Pakhtunkhwa (KP), and Gilgit-Baltistan (GB), where development gains remain tenuous and recovery from disaster events is prolonged and uneven.

Against this backdrop, a structured needs assessment was conducted to identify the key barriers, gaps, and opportunities across critical systems and population groups, with a focus on distinguishing between immediate, underlying, and structural drivers of vulnerability. The findings of this assessment directly inform the design of this programme and are summarised below, organised around the core development challenges this project aims to address.

Climate-Induced Hazards and the Need for Predictive, Inclusive Early Warning Systems

Pakistan's vulnerability to sudden-onset climate disasters is exacerbated by the inadequate integration of advanced forecasting technologies and fragmented last-mile communication systems. Despite progress in disaster risk management, early warning infrastructure remains limited in both coverage and functionality. In high-risk areas such as Gilgit-Baltistan, only 10–20% of communities are served by functioning early warning systems. These platforms are frequently reliant on outdated data collection methods, manual processes, and non-interoperable technologies. As a result, there are critical delays and inaccuracies in the dissemination of alerts.

Millions of people remain at risk due to the inefficiency and inaccessibility of existing systems. Alerts, where available, are often not communicated in ways that are actionable for vulnerable populations — including women, persons with disabilities, and linguistic minorities. Dissemination is not only delayed but also technically inaccessible or culturally misaligned, leaving communities with insufficient time to respond to imminent threats.

The needs assessment underscores the urgency of investing in data-driven, multi-hazard early warning systems (MHEWS) that integrate state-of-the-art forecasting technologies, geospatial analytics, and real-time community inputs. These systems should be capable of generating immediate, actionable alerts and ensuring their delivery through culturally and linguistically tailored communication strategies. Such improvements are essential to empower communities and local authorities to initiate timely response measures, thereby reducing disaster losses and saving lives.

At the institutional level, Pakistan's risk information systems require significant enhancement. Existing platforms are fragmented, siloed, and lack integration across agencies. Upgrading to interoperable, digital systems is critical to improving the accuracy, accessibility, and timeliness of climate and disaster-related information. Enhancements in data architecture will facilitate more informed, agile, and coordinated decision-making across national and subnational levels.

Intersecting Inequalities and the Imperative for Gender-Responsive Risk Reduction

Disaster impacts in Pakistan are shaped by entrenched socio-economic inequities that render certain groups — including women, children, and persons with disabilities — significantly more vulnerable during and after crisis events. These populations often face restricted mobility, limited access to financial and digital resources, and exclusion from both risk information systems and decision-making processes. Early warning communications are frequently inaccessible or culturally inappropriate, further compounding risk exposure and impeding timely action.

Persistent gender disparities, economic dependency, and systemic exclusion magnify the risks faced by these groups and slow their recovery following disasters. Women-headed households are more likely to rely on informal, climate-sensitive livelihoods and face greater barriers to accessing financial support or rebuilding assets. Persons with

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disabilities are often unable to access emergency services or safe evacuation routes, and their specific needs are rarely accounted for in response planning.

The needs assessment revealed that existing disaster risk reduction systems do not consistently incorporate gender- and disability-responsive approaches. Early warning systems are not adapted to the specific communication and access needs of different groups. Economic recovery and livelihood initiatives often lack targeted entry points for marginalised populations, and institutional frameworks remain largely unresponsive to the imperative of inclusive participation.

These intersecting vulnerabilities highlight the need for a structural shift in how risk is assessed and addressed. Without a deliberate focus on inclusivity — through equitable access to resources, differentiated risk communication, and increased representation of marginalised groups in planning and decision-making — disaster risk management will remain inequitable and incomplete, reinforcing cycles of vulnerability across generations.

Agriculture, Food Security and the Climate-Water Nexus

The agriculture sector, which underpins rural livelihoods and national food security, is increasingly vulnerable to climate variability, water stress, and land degradation. Flooding, drought, and shifting rainfall patterns have disrupted planting cycles, reduced yields, and contributed to soil erosion — threatening both food systems and rural incomes. These challenges are particularly acute for smallholder and women farmers, many of whom rely on subsistence production and have limited access to inputs, irrigation, and climate-resilient infrastructure.

As the agriculture–water nexus grows more fragile, there is growing interest in the adoption of more adaptive and sustainable approaches, such as drought-tolerant crops, regenerative farming practices, improved water harvesting, and decentralised irrigation. However, uptake remains limited due to financial, institutional, and technical barriers — particularly in underserved and hazard-prone regions. Without targeted support, climate shocks are likely to deepen food insecurity, entrench rural poverty, and drive migration from already vulnerable communities.

Energy Insecurity and the Role of Decentralised Renewable Solutions

An estimated 27% of rural households in Pakistan lack access to reliable electricity, limiting both emergency response capabilities and sustainable development outcomes. Power outages disrupt critical infrastructure including healthcare, communications, and water supply, especially during disaster events. The energy gap further marginalises rural communities and restricts livelihood diversification.

To address this, the needs assessment calls for the deployment of off-grid solar and wind-based microgrids to ensure reliable, climate-resilient energy access in underserved areas. These systems not only support emergency preparedness but also enhance productivity, health outcomes, and educational continuity — contributing directly to broader development goals.

Institutional Fragmentation and the Demand for Coordinated Risk Governance

Pakistan's disaster risk governance is hampered by fragmented institutional mandates, overlapping roles, and weak horizontal and vertical coordination. While national frameworks are aligned with global agreements such as the Sendai Framework and the Paris Agreement, implementation remains inconsistent, particularly at the subnational level. Provincial and district authorities often lack the institutional capacity, financial resources, and technical tools to operationalise disaster risk reduction effectively.

The assessment revealed a need for targeted institutional strengthening through capacity development, inter-agency data sharing protocols, standard operating procedures (SOPs), and localised risk governance mechanisms. Enhancing the role of local governments, civil society, and the private sector is critical to ensuring that preparedness and response systems are inclusive, agile, and sustainable.

Policy Coherence and the Localisation of National Commitments

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Despite a growing body of national strategies focused on resilience, energy transition, and climate adaptation, these policies remain insufficiently integrated into local development planning. Regulatory frameworks do not always support cross-sectoral coordination, and budgetary allocations for risk-informed programming remain limited.

To bridge the gap between policy and practice, structural reforms are needed to create enabling environments for locally led resilience-building. This includes the development of implementation frameworks, accountability mechanisms, and financing instruments that embed resilience across development sectors — with a particular focus on reaching those furthest behind.

Strategic Implications

The development challenges outlined above, as substantiated by the needs assessment, confirm that Pakistan's resilience agenda cannot be achieved through isolated or sectoral responses. What is required is an integrated, multi-sectoral, and gender-responsive approach that addresses systemic vulnerabilities while building adaptive capacities at scale.

The proposed programme seeks to respond to this need by investing in anticipatory disaster risk governance, inclusive economic empowerment, and decentralised energy access. In doing so, it aligns with Pakistan's national development priorities and global commitments under the SDGs, and lays the foundation for a more resilient, equitable, and sustainable development trajectory.

II. STRATEGY

Building on the development challenges and needs identified, this strategy presents an integrated response that reflects the complexity of Pakistan's resilience agenda. The proposed programme moves beyond fragmented interventions toward a coherent, multi-dimensional approach that simultaneously strengthens anticipatory disaster risk governance, promotes women's leadership and inclusive economic empowerment, and accelerates access to decentralised renewable energy solutions.

To this end, the programme embeds a strong digital backbone comprising EWS, AI-powered predictive analytics, and interactive dashboards to enhance real-time decision-making. It also leverages digital communication channels and remote learning platforms to ensure timely, inclusive dissemination of risk information and access to services.

A core pillar of the strategy is the integration of gender-responsive and inclusive programming. Gender-sensitive assessments and tailored capacity-building initiatives will help ensure that those disproportionately affected by disasters — especially women — receive targeted support that improves household income and fosters community-level resilience.

Taken together, these components reflect a commitment to building resilience at scale in a way that is equitable, locally owned, and informed by evidence. The programme aims not only to address immediate vulnerabilities but also to lay the foundation for long-term, climate-resilient development through inclusive, anticipatory, and sustainable systems.

1. Strategic Alignment

The programme operationalises the vision set out in Pakistan's Climate Change Policy, Vision 2025, the Prime Minister's Economic Transformation Plan 2025, and the Uraan Pakistan Programme 2024/2025, while also aligning with global frameworks such as the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals — particularly SDGs 1 (No Poverty), 2 (Zero Hunger), 5 (Gender Equality), 11 (Sustainable Cities and Communities), and 13 (Climate Action). It directly contributes to national strategic priorities and the outcomes outlined in the UNSDCF and UNDP's Country Programme Document.

The selected approach is grounded in credible evidence and draws on lessons from current prior UNDP-supported initiatives, both in Pakistan and comparable contexts. These experiences have demonstrated that digital forecasting tools, when paired with community-centred communication, significantly reduce disaster losses. Evaluations also reinforce the importance of climate-smart agricultural practices and decentralised energy systems in safeguarding livelihoods and enabling sustainable recovery.

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Moreover, the ECARE programme is strategically aligned with the World Bank's Country Partnership Framework (CPF) for Pakistan (FY26–FY35), particularly under **Outcome 3: Increased Resilience to Climate Change** and **Outcome 4: Cleaner Energy and Better Air Quality**. By strengthening anticipatory early warning systems, decentralised renewable energy solutions, and community resilience — with a strong focus on women's empowerment and inclusive access — ECARE operationalises key priorities identified in the CPF: scaling climate adaptation efforts, enhancing disaster risk management, promoting sustainable energy transitions, and fostering local resilience to climate shocks.

Similarly, the programme aligns with the **IMF's new 28-month Resilience and Sustainability Facility (RSF)** arrangement (agreed in March 2025), which aims to reduce Pakistan's vulnerability to climate shocks and build long-term resilience. Specifically, the RSF supports reforms in public investment planning for climate adaptation, disaster-resilient infrastructure, sustainable water use, energy sector transformation, and climate risk disclosure.

In doing so, ECARE is positioned to leverage and complement the broader financing flows being mobilised under Pakistan's climate agenda. Through its integrated approach — combining institutional strengthening, technology integration, and community-led action — ECARE directly supports Pakistan's shift toward a more resilient, low-carbon development trajectory.

2. Theory of Change

The proposed Theory of Change is grounded in recognising that resilience to climate-induced disasters and long-term sustainable development cannot be achieved through isolated or reactive measures. It requires **simultaneous progress in anticipatory systems, inclusive green livelihoods, and decentralised clean energy**, underpinned by **gender-responsive and digitally-enabled transformation**.

If communities at risk have access to accurate, timely, and locally relevant early warning information—and the institutional systems to act on it—they can prepare for and mitigate the impacts of disasters, reducing loss of life and damage to livelihoods.

If women and marginalised groups are economically empowered through access to productive assets, financial tools, market linkages, and decision-making roles, **then** they can actively lead local recovery and resilience-building processes, shifting from passive recipients to **strategic actors in climate adaptation and green transitions**.

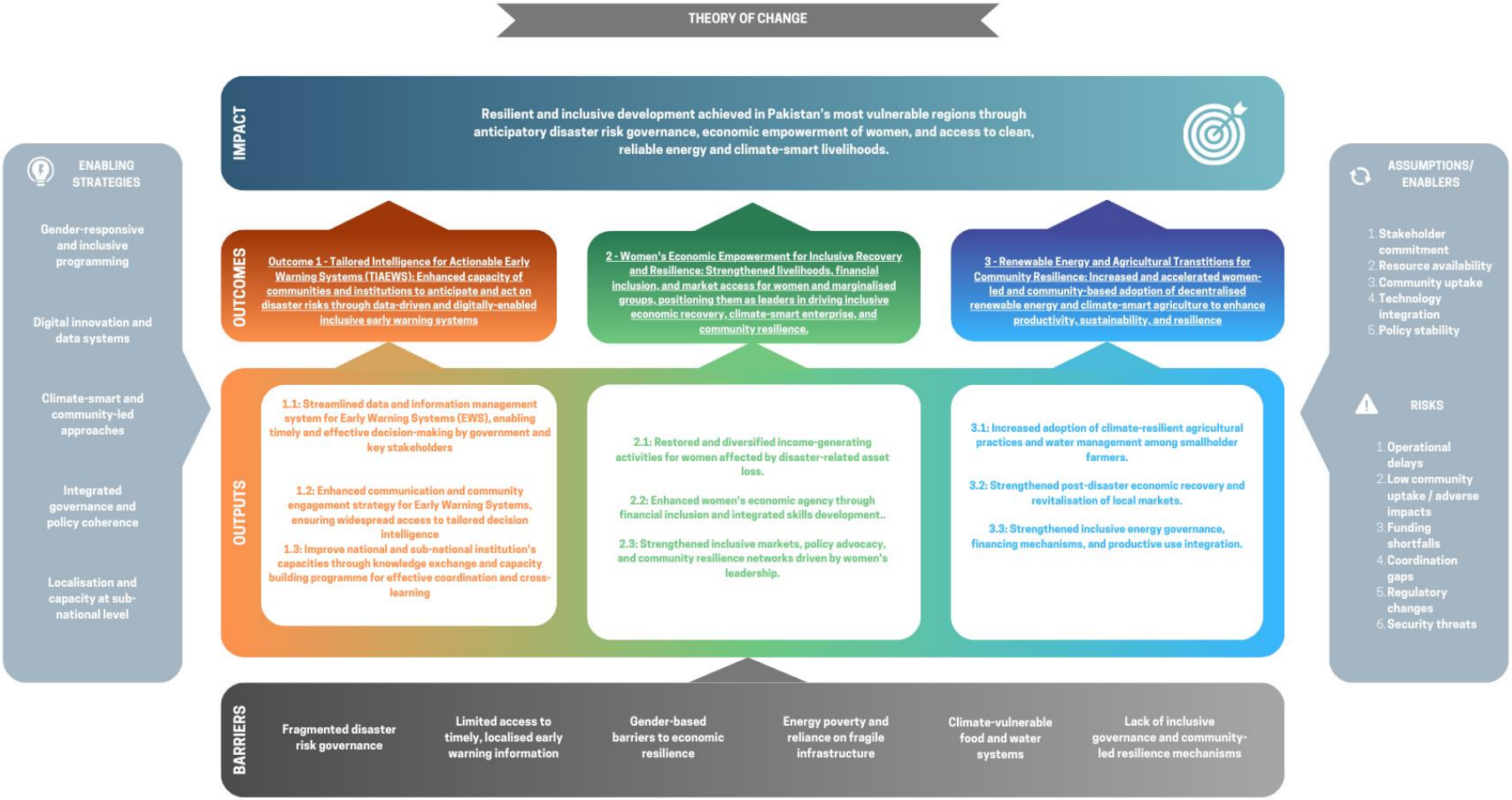
If climate-smart agricultural systems, green enterprises, and decentralised renewable energy solutions are scaled — particularly through women-led models — **then** local economies will stabilise, fossil fuel reliance will decline, and communities will transition toward more inclusive, low-carbon development pathways.

These pathways are **mutually reinforcing**: early warning systems enhance disaster preparedness and food/water security; women's economic agency boosts household resilience and local recovery; and decentralised energy unlocks productivity, service delivery, and gender-responsive innovation.

Women's empowerment acts as a catalytic enabler across all three outcomes, reducing time poverty, enhancing access to information and assets, and creating inclusive delivery mechanisms. By embedding gender transformation into the programme logic — including through women-led EWS committees, energy cooperatives, and local market systems — ECARE fosters a shift in women's roles across the climate resilience and energy ecosystem.

Together, these outcomes contribute to the overarching goal of strengthening climate resilience, promoting inclusive and sustainable development, and positioning women as key agents of change in Pakistan's most vulnerable regions.

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3. Detailed Strategic Approach and Interventions

The project is structured around **three transformative outcomes**, each designed to address specific dimensions of Pakistan's development challenge:

Outcome 1 - Tailored Intelligence for Actionable Early Warning Systems (TIAEWS): Enhanced capacity of communities and institutions to anticipate and act on disaster risks through data-driven and digitally-enabled inclusive early warning systems.

As outlined in the development challenge, Pakistan's early warning infrastructure is currently constrained by limited coverage, outdated technology, fragmented institutional coordination, and a lack of last-mile communication tailored to the needs of vulnerable populations. This outcome responds to these gaps by investing in predictive systems that are timely, inclusive, and actionable — enabling communities, institutions, and systems to anticipate and mitigate disaster impacts more effectively. By improving the availability and use of real-time risk information, strengthening coordination mechanisms, and ensuring early warning messages are locally relevant and accessible, the programme aims to reduce response times, increase uptake of pre-emptive measures by at-risk populations, and minimise loss of lives, livelihoods, and critical assets during disaster events.By integrating satellite imagery, remote sensing, geospatial mapping, and smart communication platforms, the programme will build real-time, actionable intelligence systems that drive early action. Informed by Pakistan's National Human Development Report 2024 on Digital Transformation, the programme recognises that access to and adoption of digital technologies — particularly mobile platforms, GIS, and virtual modelling (digital twins) — are critical to strengthening resilience, especially for climate-vulnerable and digitally underserved populations.

The programme will improve availability and uptake of real-time risk information, strengthen inter-agency data-sharing protocols, and ensure early warning messages are **locally relevant, linguistically accessible, and digitally disseminated** through a variety of channels including SMS, mobile applications, radio, and social media. By doing so, it aims to **reduce response times**, **increase preventive action uptake**, **address spatial inequalities** in information access, and **minimise the loss of lives, livelihoods, and critical assets** during disaster events.

Output	Activity	Description
Output 1.1: Streamlined data and information management system for Early Warning Systems (EWS), enabling timely and effective decision-making by government and key stakeholders	1.1.1. Conduct a detailed feasibility study for the installation of EWS/AWS equipment and devices in 14 districts of Gilgit-Baltistan	This activity engages a specialized consultancy firm to conduct a comprehensive vulnerability assessment in high-risk zones. The process involves extensive field surveys, analysis of historical climatic data, and integration of updated glacial vulnerability information. The consultancy will use remote sensing and geospatial mapping tools to identify optimal sensor deployment locations and evaluate regional risks.
	1.1.2. Establish protocols for data sharing and collaboration among relevant government agencies and stakeholders, and development of Dashboard for the information dissemination gathered from EWS.	This activity will engage consultants to assess existing data-sharing protocols and collaboration levels among key stakeholders. The consultant will also support the negotiation of data-sharing agreements or MOUs, ensuring compliance with legal and privacy requirements. A one-day national training session will be conducted to present the drafted protocols and gather feedback from stakeholders across federal and provincial agencies. Additionally, an IT-based Early Warning System (EWS) Data Dashboard will be developed to consolidate and visualize data from multiple sources, enabling better analysis and decision-making.

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	1.1.3 Procurement and installation of hydrometer stations, automatic weather stations (AWS), and warning posts in high-risk areas of Gilgit-Baltistan (GB)	Under this activity, the project will install a network of monitoring devices, comprising 70 Automatic Weather Stations, 70 Hydrometric Stations, and 70 Warning Posts in strategically selected locations. The process encompasses procurement, logistics, installation, and rigorous operational testing. All devices are to be integrated with AI platforms, ensuring they provide precise, real-time forecasts that directly inform disaster management decisions.
Output 1.2: Enhanced communication and community engagement strategy for Early Warning Systems, ensuring widespread access to tailored decision intelligence	1.2.1. Develop a detailed communication and engagement plan including training sessions, target audiences, messaging frameworks, and delivery channels of EWS messages and information	This activity focuses on creating warning messages tailored to local cultural and linguistic contexts. The process begins with the development of clear, accessible communication materials in local dialects, which are then disseminated via community radio, SMS alerts, and public announcement systems. The strategy is designed to ensure that critical warnings are received and understood by all target groups, thereby facilitating prompt and effective action. To enhance inclusion, the activity will design a comprehensive engagement plan that recognises the differentiated communication needs and roles of women and men. Training will be provided to committee members on hazard communication, information relay protocols, and digital tools.
	1.2.2 Conduct mock drills and training sessions in local languages for communities in targeted valleys of selected regions, including distribution of necessary awareness materials and disaster response plans.	To build community preparedness, this activity organizes a series of mock drills and training sessions. The process involves developing tailored training modules, conducting practical drills, and engaging with vulnerable groups such as women, children, and persons with disabilities. These exercises are designed to familiarize communities with emergency protocols and response actions. These trainings will serve as community facilitators during drills, ensuring women's participation is not only encouraged but enabled through safe and accessible engagement methods. This activity includes targeted distribution of solar-powered radios, mobile phones, charging devices, and digital communication tools to women in high-risk, underserved areas. It will also assess existing gender gaps in last-mile connectivity and address barriers through decentralised, women-led communication hubs that ensure real-time access to EWS alerts.

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	1.2.3 Design and produce gender inclusivecommunication materials such as pamphlets, posters, and digital content (Radio, SMS, social media, TV) tailored to different demographic groups, literacy levels, and local languages.	This activity includes targeted awareness to the vulnerable communities via digital communication tools to women and men in high-risk, underserved areas. It will also assess existing gender gaps in last-mile connectivity and address barriers through decentralised, women-led communication hubs that ensure real-time access to EWS alerts.
	1.2.4 Implement a communication campaign to test the effectiveness of selected communication strategies and materials	This campaign will serve as a pilot to evaluate the resonance and reach of newly developed messaging content. The results of this campaign will feed as the improvement in the awareness level of the community against disasters community preparedness efforts.
Output 1.3: Improve national and sub-national institution's capacities through knowledge exchange and capacity building programme for effective coordination and cross-learning	1.3.1 Develop and institutionalise inter-agency SOPs and data-sharing protocols through stakeholder consultations and technical reviews.	This activity evaluates existing data-sharing practices across agencies and develops unified Standard Operating Procedures (SOPs) to streamline communication. The process includes stakeholder consultations, gap analysis, and the drafting of a formal protocol that facilitates effective inter-agency information exchange.

Outcome 2 - Women's Economic Empowerment for Inclusive Recovery and Resilience: Strengthened livelihoods, financial inclusion, and market access for women and marginalised groups, positioning them as leaders in driving inclusive economic recovery, climate-smart enterprise, and community resilience.

Women and other marginalised groups face systemic barriers that significantly constrain their economic resilience and ability to recover from climate shocks. These barriers include limited access to productive assets, skills training, formal financial services, and equitable market opportunities, compounded by exclusion from decision-making processes around resilience and economic recovery. This outcome directly addresses these constraints by positioning women as active leaders and change agents in economic recovery, rather than merely passive recipients of support.

The programme will empower women through targeted interventions that restore, diversify, and sustainably enhance their livelihoods. By improving women's access to productive assets—including climate-smart agricultural inputs and renewable energy technologies—alongside tailored financial products, digital skills, and market linkages, the programme fosters women's economic agency and leadership in climate resilience. Strengthening institutional and social support mechanisms, such as women-led community hubs and inclusive governance structures, will further ensure that women can actively shape inclusive recovery efforts and resilience strategies.

Ultimately, this integrated approach will significantly enhance women's financial independence and adaptive capacities, driving inclusive development and resilience across entire communities. These strategic investments will create multiplier effects, reducing gender-based economic vulnerabilities and positioning women at the heart of climate resilience, renewable energy transitions, and sustainable economic growth.

Output	Activity	Description
Output 2.1: Restored and diversified income-generating activities for women affected by disaster-related asset loss.	**2.1.1** Conduct gender-sensitive assessments to map asset losses, operational challenges, and support needs of women-led enterprises in target communities.	A multi-phased assessment will be undertaken that begins with comprehensive surveys, focus group discussions, and field visits across target communities. Trained evaluators will collect both quantitative and qualitative data to map asset losses, document operational challenges, and identify critical gaps among women-led micro and small enterprises. This process involves community consultations and participatory data collection methods to ensure that the unique

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		needs and vulnerabilities of women are accurately captured.
	2.1.2 Distribute in-kind livelihood support (e.g. agricultural tools, fertilisers, and kits) to resume and diversify income-generating activities, including climate-smart agricultural practices and renewable energy technologies. **2.1.3** Provide follow-up support and technical assistance to restore productive capacity.	Building on the findings of the assessment, the project will implement an immediate relief response through the distribution of essential agricultural tools, fertilisers, and specialised livelihood kits designed for women. The distribution process will be coordinated through local partner organizations to ensure timely and equitable delivery. A tracking system will be established to monitor the volume and value of support distributed, as well as to gauge the restoration of productive capacity within women-led enterprises.
Output 2.2: Enhanced women's economic agency through financial inclusion and integrated skills development.	**2.2.1** Conduct training needs assessments to identify capacity gaps in entrepreneurship, digital literacy, renewable energy, and climate-resilient agriculture.	A systematic training needs assessment will be conducted using structured surveys, interviews, and focus group discussions with women entrepreneurs. This process will identify key skill gaps—ranging from business management and digital literacy to climate-smart agricultural practices and renewable energy. The assessment will also incorporate feedback from local market stakeholders to ensure the training plan aligns with both current challenges and future opportunities.
	2.2.2. Deliver targeted training in entrepreneurship, digital marketing, and sustainable agricultural and renewable energy practices through workshops and hands-on sessions.	Following the needs assessment, a series of comprehensive workshops and hands-on training sessions will be organized. These sessions will cover critical topics, including effective business management, modern digital marketing strategies, and the technical aspects of climate-smart agriculture. By integrating both theoretical and practical components, the training will empower participants with actionable skills and strategies for sustainable business growth.
	2.2.3. Facilitate access to micro-credit and deliver financial literacy training, supporting renewable energy and climate-smart agricultural activities.	To address the financial constraints faced by women-led enterprises, the project will establish partnerships with local financial institutions. This will facilitate access to micro-credit facilities alongside comprehensive financial literacy programs. Training sessions will focus on budgeting, savings, investment strategies, and effective financial management practices tailored for small-scale businesses.
Output 2.3: Strengthened inclusive markets, policy advocacy, and community resilience networks driven by women's leadership.	**2.3.1** Organise networking events and mentorship programmes to connect women entrepreneurs with peers, experts, and investors.	The project will facilitate targeted events, workshops, and mentorship initiatives designed to connect women entrepreneurs with industry experts, potential investors, and peers. These networking sessions will be structured to encourage knowledge sharing, collaborative problem-solving, and the development of robust business relationships. Special attention will be given to ensuring that the mentorship component fosters continuous learning and innovation.
	2.3.2 Conduct policy dialogues and advocacy engagements to promote gender-responsive economic reforms and	In parallel, the project will actively engage with local authorities, women's organizations, and relevant stakeholders through a series of policy dialogues. These sessions will be designed to advocate for reforms that support women's economic rights, improve market access, and ensure equitable resource distribution. The

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		access to renewable energy.	dialogue process will culminate in the documentation of policy recommendations, forming a basis for ongoing advocacy efforts.
	2.3.3	Establish community-based hubs led by women as centres of excellence for training, enterprise incubation, renewable energy awareness, and climate-smart agricultural practices.	Local resource centers will be set up to function as community hubs. These centers will serve as dedicated spaces for continuous training, mentorship, and peer-to-peer learning. They will be equipped with the necessary technical and informational resources to provide ongoing support to women entrepreneurs. Regular engagement sessions and technical assistance programs will be integrated into the operations of these hubs.

Outcome 3 – Renewable Energy and Agricultural Transtitions for Community Resilience: Increased and accelerated women-led and community-based adoption of decentralised renewable energy and climate-smart agriculture to enhance productivity, sustainability, and resilience

Climate change and extreme weather events continue to destabilise livelihoods across Pakistan, particularly in rural and climate-vulnerable areas. Erratic weather patterns and water stress undermine agricultural productivity, while energy poverty, high fossil fuel dependency, and digital infrastructure gaps constrain the resilience of households, enterprises, and essential services.

This outcome addresses these systemic challenges by scaling access to decentralised, renewable energy and promoting climate-smart agricultural transitions as dual pillars of resilience and inclusive development. Women and marginalised groups are placed at the centre of this transformation—as agri-entrepreneurs, energy users, and value chain actors—ensuring that solutions are both gender-responsive and community-owned.

By leveraging digital tools (e.g., remote sensing, mobile-based energy payments, agri-voltaics) and deploying decentralised systems (e.g., solar-powered irrigation, biogas digesters, microgrids), the programme will improve productivity, reduce greenhouse gas emissions, and strengthen the sustainability of economic recovery. Institutional support, public-private-community partnerships, and targeted green financing will ensure scale and long-term viability.

Together, these interventions will enable vulnerable communities—especially women-led enterprises—to transition toward cleaner, more efficient, and climate-resilient local development pathways.

Output	Activity		Description
Output 3.1: Increased adoption of climate-resilient agricultural practices and water management among smallholder farmers.	**3.1.1**	Conduct gender-responsive agricultural vulnerability assessments and identify priority intervention zones using remote sensing and stakeholder consultations.	Rapid field surveys, remote sensing technologies, and stakeholder consultations will be deployed to assess local agricultural vulnerabilities and women's experiences. This process will map priority intervention zones and guide the strategic placement of demonstration plots as well as capacity-building initiatives.
	3.1.2	Establish demonstration plots and facilitate hands-on training to farmers to promote best practices in climate-smart agriculture and efficient water use.	Pilot sites will be established to showcase best practices in climate-smart agriculture, including hydroponics, drip irrigation, agroforestry, and smart irrigation systems. These demonstration plots will serve as living laboratories, where innovative water conservation and yield-enhancing techniques are practiced and refined.
	3.1.3	Conduct training sessions on sustainable farming and efficient water use.	
Output 3.2: Strengthened post-disaster economic	**3.2.1**	Provide business support and technical assistance for enterprise revival.	Inclusive feasibility assessments will be carried out in partnership with community-based women's groups and local authorities to identify optimal locations and

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recovery and revitalisation of local markets.		configurations for renewable energy systems. These studies will prioritise the specific energy needs of women in domestic, agricultural, and entrepreneurial roles, ensuring that the resulting systems address both productive and household energy requirements. Participatory tools such as focus group discussions and co-design workshops will be used to ensure that women's preferences, safety concerns, and usage patterns shape the final system design and deployment strategy.
	3.2.2 Implement market assessments and promotional activities.	Tailored training programs covering financial literacy, digital marketing, and business management will be implemented to revitalize small businesses. These sessions will integrate modules on disaster resilience and sustainable business practices to empower local entrepreneurs.
	3.2.3 Facilitate the formation of cooperatives to enhance market linkages.	
Output 3.3: Strengthened inclusive energy governance, financing mechanisms, and productive use integration.	**3.3.1** Establish gender-inclusive governance structures for renewable energy systems, ensuring women's leadership and representation	This activity will support the formation of energy governance committees at the community level, with mandated representation and leadership roles for women. Women will be involved in system oversight, operational decision-making, tariff setting, and dispute resolution. Training modules on governance, technical monitoring, and system maintenance will be developed to build the capacity of women members to effectively lead and influence energy-related decision-making processes.
	3.3.2. Procure and install renewable energy equipment to achieve the targeted kW capacity.	Solar panels will be installed over agricultural fields to generate electricity while reducing water evaporation. Complementary solar-powered water pumping and purification systems will be integrated to support both agricultural and community needs.
	3.3.3 Integrate renewable energy solutions into agricultural value chains and small businesses, explicitly supporting women-led enterprises.	This activity will promote the integration of solar irrigation, biogas for food processing, and solar-powered cold storage in women-led agricultural ventures and microenterprises. Technical training will be offered to women on the installation and maintenance of these technologies. Partnerships will be fostered with market actors to ensure uptake and sustainability, and support mechanisms such as grants or pay-as-you-go models will be introduced to accelerate women's ownership and control over productive-use energy assets.

III. RESULTS AND PARTNERSHIPS

i. Expected Results

Outcome 1: Tailored Intelligence for Actionable Early Warning Systems (TIAEWS): Enhanced capacity of communities and institutions to anticipate and act on disaster risks through data-driven, inclusive early warning systems.

This outcome seeks to establish a transformative, multi-hazard early warning system (MHEWS) that enables Pakistan to shift from a reactive to a proactive disaster risk management paradigm. The system will be designed to deliver anticipatory, data-driven, and inclusive early warnings that reach the most vulnerable populations in a timely and

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actionable manner. It will integrate high-resolution climate and hydrological data with artificial intelligence, predictive analytics, and geospatial modelling to enhance the accuracy, precision, and speed of forecasts.

At the core of this outcome is the development of robust institutional and technical capacities across national, provincial, and district levels to use real-time risk data for anticipatory planning and coordinated emergency response. This includes the deployment of 210 advanced monitoring devices (Automatic Weather Stations, hydrometric sensors, and warning posts), operationalisation of a shared data platform, and development of interoperable dashboards to facilitate rapid decision-making.

Recognising the communication gap that often prevents early warnings from reaching those who need them most, the project will also establish resilient, renewable energy–powered communication infrastructure and implement culturally responsive, local-language messaging strategies. Community drills and training activities will further enhance preparedness among women, youth, and persons with disabilities—groups that are often excluded from traditional EWS frameworks. By embedding early warning within the broader food–water–climate nexus, the system will incorporate risk indicators related to water stress and agriculture, enabling more holistic response planning. Together, these investments will reduce disaster response times, minimise human and economic losses, and enhance the resilience of at-risk communities through anticipatory, preventive, and inclusive risk governance.

Expected Results:

- Real-time, AI-integrated early warning system operational in high-risk districts, underpinned by a network of 210 newly installed monitoring devices (AWS, hydrometric stations, and warning posts).
- Forecasting models updated with high-resolution climate data and predictive analytics, supported by an interactive dashboard accessible to national and subnational actors.
- Early warning coverage expanded to include agricultural and water-related hazards, enabling localised planning for food and water security.
- Multi-channel, culturally relevant risk communication systems established, delivering timely alerts in local languages and formats through SMS, radio, and public announcements.
- Community preparedness enhanced through over 50 simulation drills and awareness sessions, reaching at least 2,800 individuals, including women, youth, and persons with disabilities.
- Renewable energy–powered communication infrastructure deployed in remote areas, ensuring system functionality during outages.
- Institutional mechanisms strengthened through inter-agency protocols, SOPs, and a shared digital dashboard enabling coordinated, anticipatory action across agencies.

Outcome 2: Women's Economic Empowerment for Inclusive Recovery and Resilience: Strengthened livelihoods, financial inclusion, and market access for women and marginalised groups, positioning them as leaders in driving inclusive economic recovery, climate-smart enterprise, and community resilience.

This outcome seeks to rebuild, diversify, and strengthen women-led livelihoods in climate-vulnerable and flood-affected areas by addressing systemic barriers that hinder women's economic participation and resilience. The programme adopts a multi-pronged strategy to provide targeted support for asset recovery, skills development, financial inclusion, and access to inclusive international markets, linkages, export channels, agricultural trading and strengthening cultural linkages with neighbouring countries like China.

The approach begins with gender-sensitive assessments to understand the specific challenges faced by women in restoring their income-generating activities. It then delivers tailored in-kind support and training interventions to enhance entrepreneurial capacity, digital and financial literacy, and adaptive skills, including climate-smart agriculture and business innovation.

Women-led micro and small enterprises will be supported to link to financial institutions and savings mechanisms, promoting long-term financial independence. The project will also foster enabling environments through community-based resource hubs, mentorship programmes, and structured policy dialogues that address regulatory and normative constraints.

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Crucially, this outcome targets not only economic recovery but also the transformation of local systems to be more inclusive, equitable, and resilient. Strengthening women's agency and economic roles will generate spillover benefits for household income, food security, and broader community stability — ultimately embedding gender-responsive resilience at the grassroots level.

Expected Results:

- Women's livelihoods in target districts recovered and diversified through in-kind support, restored productive capacity, and resilience-focused interventions.
- Increased income and financial independence among women entrepreneurs, measured through improved revenue levels and access to micro-credit and savings schemes.
- Enhanced technical and business skills among women through structured training in business planning, digital literacy, and climate-smart practices.
- Improved financial inclusion, demonstrated by expanded access to microfinance, insurance products, and digital banking tools.
- Strengthened market linkages for women-led enterprises via networking, mentorship, and community-based support platforms.
- Operational community hubs established as centres for continuous training, peer support, and access to market information.
- Policy recommendations on inclusive economic recovery generated and presented to local authorities to influence reforms that support women's participation in sustainable development processes.
- A multiplier effect achieved through increased household income, greater economic decision-making power for women, and stronger community resilience.

Outcome 3 – Renewable Energy and Agricultural Transitions for Community Resilience: Increased and accelerated women-led and community-based adoption of decentralised renewable energy and climate-smart agriculture to enhance productivity, sustainability, and resilience.

This outcome aims to build climate-resilient, inclusive local economies in disaster-affected and climate-vulnerable areas by integrating climate-smart agricultural practices, supporting post-disaster enterprise recovery, and accelerating access to decentralised renewable energy solutions.

The strategy adopts a three-pronged approach. First, it strengthens climate-adaptive agriculture by establishing demonstration plots and providing farmer training in efficient water management, agroecology, and sustainable productivity techniques. Second, it promotes economic recovery by revitalising small and micro-enterprises through targeted business training, market development, and the creation of local economic hubs. Finally, it catalyses the shift to clean energy through off-grid renewable installations, technical skills development, and innovative green financing solutions.

This holistic package enables communities to rebuild more sustainably after climate shocks, while laying the groundwork for long-term food, income, and energy security. By embedding gender-sensitive design, community ownership, and technical innovation, the outcome promotes sustainable development that is locally driven, equitable, and environmentally sound.

Expected Results:

- Increased agricultural productivity and resilience through adoption of climate-smart practices, demonstrated by improved yields and incomes in target farming communities.
- A network of demonstration plots and pilot sites established, serving as community-led platforms for agroecological learning and innovation.
- Disaster-affected small and micro-enterprises revived through tailored business and vocational training, with at least 300 businesses supported.
- Strengthened market linkages and cooperative models developed, enabling producers to access value chains and financial services through local economic hubs.
- Off-grid renewable energy systems deployed in underserved areas, powering homes, community infrastructure, and productive uses, reducing reliance on fossil fuels.

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- Integrated agri-voltaic and solar-powered water systems operationalised, improving resource efficiency in farming and service delivery.
- Local technicians certified and renewable energy value chains strengthened through targeted capacity building and partnerships with technical agencies.
- Green financing mechanisms piloted, increasing private and community investment in clean energy and sustainable livelihoods.
- Enhanced community resilience, energy access, and inclusive economic growth in target districts, aligned with SDGs 2 (Zero Hunger), 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), and 13 (Climate Action).

ii. Resources Required to Achieve the Expected Results

Achieving the desired outcomes of this project calls for a well-coordinated mix of technical, financial, and human resources. The design of the change pathway within our theory of change underscores that the successful delivery of project outputs depends on the strategic deployment of critical inputs. These include specialised expertise, robust infrastructure, comprehensive capacity building, and effective partnerships, all supported by dedicated UNDP staff time at the country, regional, and HQ levels, whose involvement has been thoroughly estimated and costed in the project budget.

Outcome 1: Tailored Intelligence for Actionable Early Warning Systems (TIAEWS)

To transform early warning systems in high-risk regions, the following resources are essential:

- **Technical Expertise:** Engagement of climate scientists, hydrologists, data analysts, and IT specialists is vital to design, deploy, and maintain the advanced forecasting systems and interactive Dashboards. These experts ensure that real-time data is accurately interpreted and converted into actionable alerts.

- **Consultancy and Contractual Services:** A dedicated consultancy firm will undertake a comprehensive feasibility study to pinpoint high-risk zones and optimal monitoring station placements. Additionally, contractual services will be secured for data assessment, stakeholder workshops, and specialized training sessions (including a 45-day consultant for the feasibility study and further support for community engagement).

- **Infrastructure and Equipment Procurement:** Procuring approximately 70 Automatic Weather Stations, 70 Hydrometric Stations, and 70 Warning Posts, as well as renewable energy-powered communication nodes (e.g., solar-powered systems with battery backups), is fundamental. This hardware backbone is critical to ensure uninterrupted data collection and communication, even in challenging conditions.

- **Capacity Building and Training:** Funds will be allocated for organizing workshops, mock drills, and training sessions aimed at both government officials and community members. These initiatives will build local capacity and ensure all stakeholders can use the new systems effectively.

- **Financial Resources:** A dedicated budget of 8 million USD will cover procurement, technical support, training initiatives, media campaign development, and ongoing operational maintenance. This investment is crucial for the sustained functioning of the early warning systems.

- **Project Management and UNDP Staff Time:** Critical oversight will be provided through UNDP staff engagement at various levels country, regional, and HQ to manage technical aspects, coordinate activities, and ensure alignment with national disaster management frameworks and SDG targets. This structured management approach guarantees seamless implementation and adaptation as project needs evolve.

Outcome 2: Women's Economic Empowerment for Inclusive Recovery and Resilience

For achieving transformative improvements in women’s economic empowerment, the following resources are required:

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- **Human Resources:** A dedicated team comprising gender specialists, experienced trainers, business mentors, and financial advisors will be mobilized. These professionals will lead capacity-building sessions, conduct in-depth assessments, and steer policy advocacy initiatives to support women-led enterprises.
- **Financial Investments:** 6 million USD funding is essential to support in-kind asset distribution, training programs, and the establishment of community hubs. These resources will also cover partnerships with local financial institutions to facilitate access to micro-credit and digital banking services, ensuring long-term financial inclusion.
- **Technological Resources:** Deployment of robust digital platforms and data management systems will support ongoing training, virtual mentorship, and real-time progress monitoring. These technological tools are indispensable for tracking performance indicators and enabling continuous learning.
- **Partnerships and Collaborations:** Strategic collaborations with local financial institutions, NGOs, government agencies, and community-based organizations will ensure effective outreach and robust advocacy for policy reforms. Such partnerships are critical to sustaining financial inclusion and market integration efforts.
- **Logistical and Operational Support:** Efficient procurement and distribution mechanisms for agricultural tools, livelihood kits, and training materials are needed. This includes operational support for organizing workshops, field assessments, and networking events to facilitate community engagement and ensure timely delivery of services.

Outcome 3: Renewable Energy and Agricultural Transtitions for Community Resilience: To build resilient communities through integrated climate-smart agriculture, economic recovery, and renewable energy solutions, the project will require:

- **Human Resources:** A team of technical experts in climate-smart agriculture, renewable energy, and economic recovery will drive this outcome. Local trainers, technical support personnel, financial advisors, and dedicated project management staff will support the implementation and sustainability of interventions.
- **Financial Investments:** 11 million USD budget is necessary for infrastructure development, procurement of renewable energy systems (such as solar panels, wind turbines, and microgrid controllers), and agricultural equipment. Investment will also extend to capacity-building initiatives, feasibility studies, and innovative financing instruments (e.g., green financing mechanisms) to facilitate long-term sustainability.
- **Technological Resources:** Advanced agricultural tools, including IoT-enabled sensors and smart irrigation systems, will enhance on-farm productivity and water management. Complementary renewable energy technologies—such as solar panels, wind turbines, and integrated data platforms—will ensure a reliable power supply for critical services and local industries.
- **Partnerships and Collaborations:** Successful implementation will depend on strong partnerships with government agencies, UNDP country teams, local research institutions, NGOs, private sector entities, and community-based organizations. Collaborations with financial institutions will also support microfinance and green financing initiatives, enabling broader access to sustainable resources.

iii. Partnerships

Government Agencies and Public Institutions: For a project aimed at enhancing disaster preparedness and driving economic resilience, strong collaboration with key government agencies is crucial. Potential partners include national and local bodies such as the National Disaster Management Authority (NDMA), the Pakistan Meteorological Department (PMD), and relevant provincial or district authorities in Gilgit-Baltistan and other vulnerable regions. The project has been developed and prepared in consultation with the government department. PMD and P&DD GB were consulted mainly and supported with the letter of support for the project funded by China. These agencies will play a pivotal role in providing critical data, facilitating regulatory approvals, and coordinating inter-agency information-sharing protocols. Moreover, local government units, through their established networks, will help ensure that the early warning messages reach target communities and that capacity-building activities are aligned with national disaster risk management frameworks.

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Academic and Research Institutions: Robust evidence and up-to-date research form the backbone of the project's advanced forecasting and climate resilience components. Collaborations with universities and research centers specializing in climate science, hydrology, and geospatial analytics will be crucial. These institutions can support the feasibility study and vulnerability assessments by providing technical guidance, remote sensing expertise, and scientific validation of the AI-based predictive models. In addition, research partnerships will foster innovation in climate-smart agricultural practices and renewable energy solutions, ensuring that the project's interventions are grounded in best practices and cutting-edge technology.

Private Sector and Technology Providers: Given the project's reliance on state-of-the-art monitoring devices and digital platforms, partnerships with technology firms and private sector innovators are essential. Potential partners include companies that specialize in Internet of Things (IoT) solutions, automated weather stations (AWS), hydrometric sensors, and data integration platforms. These partners can supply, install, and maintain the advanced hardware and software required to achieve real-time forecasting and data visualization through an interactive Dashboard. Additionally, renewable energy providers and microgrid developers will be critical for installing solar-powered communication nodes and off-grid energy systems, thereby ensuring the continuity of early warning operations during power outages.

Civil Society Organizations and Community-Based Partners: Local non-governmental organizations (NGOs), community-based organizations (CBOs), and women's groups will be central to ensuring that interventions are culturally appropriate and socially inclusive. In Outcome 2, which focuses on women's economic empowerment, partners with demonstrated expertise in gender-responsive programming are needed to conduct livelihood assessments, distribute in-kind support, and implement capacity-building and financial inclusion initiatives. These organizations possess the local trust and community reach necessary for effective implementation of training sessions, community drills, and market linkage events. Their involvement will help ensure that critical messages are disseminated in local languages and that interventions are tailored to the specific needs of vulnerable groups.

Financial Institutions and Microfinance Providers: Access to financial services is a cornerstone of the economic recovery and livelihood resilience components. Strategic partnerships with local banks, microfinance institutions, and specialized financial intermediaries will facilitate the rollout of micro-credit schemes and green financing instruments. These institutions will not only help in mobilizing financial resources for women-led enterprises but also support innovative financial mechanisms that underpin the renewable energy transition. By offering tailored financial products and capacity-building in financial literacy, these partners will ensure that beneficiaries can sustainably manage and grow their businesses.

Specialized Consultants and Technical Experts: To address the highly technical aspects of the project—ranging from the design of data-sharing protocols to the deployment of AI-based forecasting tools—engagement with specialized consultancy firms is imperative. These experts will conduct comprehensive feasibility studies, deliver detailed assessments of existing information gaps, and design standardized operating procedures for inter-agency collaboration. Their technical support will be critical during both the installation phase of monitoring devices and the subsequent training sessions, ensuring that all components of the early warning system operate seamlessly.

Integrating Partners Across Outcomes

For **Outcome 1 (Early Warning Systems)**, partnerships with government agencies, technology providers, and specialized consultants will ensure that the advanced forecasting, resilient infrastructure, and real-time data management systems are robust and responsive. In **Outcome 2 (Women's Economic Empowerment)**, collaboration with civil society organizations, local women's groups, and financial institutions will drive asset restoration, capacity-building, and market linkages that empower women economically. Finally, **Outcome 3 (Climate Resilience, Economic Recovery, and Renewable Energy Transition)** will benefit from partnerships with agricultural research institutions, renewable energy companies, and local economic development agencies to revitalize local economies and support sustainable energy solutions.

These carefully selected partners will form a cohesive network that spans technical, financial, and community dimensions ensuring that interventions are well-coordinated, scalable, and capable of driving long-term transformation. By tapping into the expertise and established local presence of each partner, UNDP's direct implementation modality will create a multi-stakeholder ecosystem that not only addresses immediate challenges but also builds the institutional and social capital needed for enduring resilience.

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iv. Risks and Assumptions

The successful implementation of this direct-implementation UNDP project depends on a range of critical assumptions and is exposed to several risks that could affect the achievement of its outcomes. Key assumptions underpinning the project include:

- **Sustained Stakeholder Commitment:** The project assumes that government agencies, local partners, and community leaders will remain fully engaged and committed to the project's processes from data sharing and inter-agency coordination to community training and policy dialogue.
- **Availability of Resources:** It is assumed that the necessary financial, technical, and human resources will be available throughout the project lifecycle, including the timely procurement of state-of-the-art monitoring devices and renewable energy systems.
- **Community Readiness and Acceptance:** The project presumes that targeted communities especially vulnerable groups such as women, children, and persons with disabilities will actively participate in capacity-building initiatives and readily adopt the early warning mechanisms.
- **Technological Integration:** It is assumed that advanced technologies (e.g., EWS , AI-based analytics, renewable energy-powered communication nodes) will be successfully integrated into the existing local infrastructure without major compatibility issues.
- **Stable Policy and Regulatory Environment:** The project is based on the expectation that there will be minimal disruptive changes in national and international regulatory frameworks that govern disaster risk management, renewable energy, and social safeguards.
- **Institutional and Community Ownership for Sustainability:** It is assumed that national institutions, local authorities, and community groups will take ownership of the project's systems and interventions (e.g., Early Warning Systems, renewable energy infrastructure, women's livelihood initiatives) and integrate them into regular operations and development plans. Ongoing maintenance, budgetary allocations, and technical capacity will be prioritised beyond the project lifecycle to ensure long-term sustainability.

However, various risks could threaten the achievement of project results. These risks are mapped across several Enterprise Risk Management (ERM) categories and include, among others:

1. **Operational Risks:** Delays in procurement or logistical challenges could hinder the deployment of critical technologies (e.g., Automatic Weather Stations, Hydrometric Stations, Warning Posts). Any delays in these areas can directly impact the functionality of the early warning system, thereby reducing disaster preparedness and response effectiveness.
2. **Social and Environmental Risks:** Ineffective community engagement and culturally inappropriate communication may lead to low adoption rates of the early warning system. Additionally, there is a potential for adverse social or environmental impacts if key stakeholder grievances are not adequately addressed or if natural resources are mismanaged during implementation.
3. **Financial Risks:** Insufficient funding, delays in disbursement, or mismanagement of cash flows may result in reduced operational capacity, thereby impacting the procurement and installation of project assets. Such financial constraints could delay or even derail critical project activities.
4. **Organizational and Coordination Risks:** Fragmented governance or weak inter-agency coordination can lead to inefficiencies in data sharing and decision-making processes. This risk is compounded if there is no unified protocol or if capacity-building among partners is insufficient.
5. **Regulatory Risks:** Changes in local or international regulatory frameworks may affect project approvals, increase compliance costs, or necessitate modifications to the project scope, ultimately delaying implementation.
6. **Safety and Security Risks:** The project's operations in high-risk, remote, or off-grid areas expose it to natural hazards (such as extreme weather events) and cybersecurity threats, which could jeopardize both project personnel and critical infrastructure.
7. **Insufficient Post-Project Institutionalisation and Maintenance:** There is a risk that, despite initial investments and capacity-building efforts, key systems and infrastructures (e.g., monitoring stations, decentralised energy systems, community hubs) may not be adequately maintained, updated, or funded after project closure. This could erode the sustainability of project outcomes and diminish community resilience gains over time.

To mitigate these risks, the project will employ robust risk management strategies. These include:

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- **Enhanced Coordination and Monitoring:** Developing unified data-sharing protocols, establishing interactive dashboards, and conducting regular inter-agency workshops.
- **Proactive Community Engagement:** Designing culturally tailored communication strategies, organizing extensive training and mock drills, and implementing grievance redress mechanisms.
- **Financial Safeguards:** Securing multi-year funding commitments, establishing contingency funds, and closely monitoring budget availability and cash flows.
- **Regulatory Vigilance:** Continuously monitoring the regulatory environment and engaging with policymakers to ensure timely adaptation to any changes.
- **Safety and Security Protocols:** Implementing stringent security measures, updating cybersecurity defenses, and preparing detailed emergency response plans.
- **Post-Project Sustainability and Institutionalisation:** Formal transition plans will be developed, including MOUs with relevant government institutions, budget forecasts, and post-project maintenance agreements. The project will prioritise government ownership by embedding responsibilities into institutional mandates and operational plans. Community-led management models and continuous technical training will also be promoted to reinforce local ownership and long-term sustainability.

The full risk log categorizes these risks under the following dimensions: Social and Environmental, Financial, Operational, Organizational, Reputational, Regulatory, Strategic, and Safety and Security. This categorization ensures that both adverse social and environmental impacts, as well as other project risks, are managed effectively, as outlined in Annex 3.

v. Stakeholder Engagement

The project's stakeholder engagement strategy is designed to be inclusive, transparent, and participatory, ensuring that every phase, from planning and implementation to monitoring and evaluation, is informed by the voices and needs of both direct beneficiaries and those who may be potentially affected. Below is a detailed description of the stakeholder engagement approach:

Stakeholder Engagement Framework

1. Mapping and Identification of Key Stakeholders

To achieve its multifaceted objectives, the project first undertakes a thorough mapping exercise to identify all relevant stakeholders. This includes:

- **Government Agencies:** Key national, provincial, and local institutions such as the National Disaster Management Authority (NDMA), local disaster management bodies, and other relevant ministries.
- **Community-Based Organizations (CBOs) and Local Leaders:** Groups that represent vulnerable communities, including women's associations, agricultural cooperatives, and indigenous community groups.
- **Beneficiary Groups:**
    - **Targeted Groups:** These are the primary intended beneficiaries, such as vulnerable populations in high-risk regions (e.g., communities in Gilgit-Baltistan), women-led micro and small enterprises, farmers, and other climate-vulnerable groups. A baseline assessment using surveys, focus groups, and participatory mapping will be conducted to identify and profile these groups accurately.
    - **Other Potentially Affected Groups:** This includes community members not directly targeted by the interventions but who may experience indirect impacts such as neighboring communities, local businesses, and service providers.
- **NGOs, Donors, and Private Sector Partners:** Organizations that can offer technical, financial, or operational support, including UNDP country teams, local NGOs, academic institutions, and financial service providers.
- **Media and Communication Channels:** Local radio, print media, and digital platforms that can disseminate project information in culturally appropriate formats.

2. Engagement Strategies for Targeted and Affected Groups

The project employs a multi-layered approach to ensure that all stakeholder voices are heard and incorporated into decision-making processes:

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- **Inclusive Consultative Processes:**
  - **Workshops and Focus Group Discussions:** Regular stakeholder meetings will be held to share project plans, gather input, and discuss progress. Special sessions will target vulnerable groups such as women, children, and persons with disabilities to ensure their specific needs are addressed.
  - **Community Dialogues:** Public forums and town hall meetings in local languages will provide an open platform for community members to express their views and suggestions.
- **Tailored Communication and Outreach:**
  - **Multi-Channel Dissemination:** The project will use culturally sensitive and language-specific communication tools such as community radio broadcasts, SMS alerts, and print materials to keep communities informed.
  - **Customized Engagement Materials:** Visual aids, brochures, and training modules will be developed with input from local stakeholders to ensure clarity and relevance.
- **Access to Feedback and Complaint Mechanisms:**
  - **Social and Environmental Compliance Reviews:** In line with UNDP's practices, the project will implement a Stakeholder Response Mechanism (SRM) that allows all community members both targeted beneficiaries and other affected groups to submit concerns about social and environmental impacts.
  - **Transparent Reporting:** Regular public updates on how feedback is being addressed will be shared through community hubs, local government offices, and digital platforms, ensuring that accountability is maintained throughout the project lifecycle.

3. Continuous Capacity Building and Adaptive Management

The project commits to strengthening the capacities of local stakeholders by:

- **Training and Technical Assistance:** Organizing capacity-building workshops and training sessions for government officials, community leaders, and local technical teams. These sessions will focus on the operation of early warning systems, data-sharing protocols, and sustainable economic practices.
- **Empowering Local Institutions:** Facilitating partnerships with local universities, research institutions, and NGOs to build a sustainable support network that enhances local ownership and long-term project sustainability.
- **Adaptive Management:** Establishing feedback loops where stakeholder inputs are systematically integrated into the project's monitoring and evaluation framework. This ensures that any concerns or suggestions are promptly addressed and that the project remains responsive to the evolving needs of its stakeholders.

4. Promoting Transparency and Accountability

Transparency is a cornerstone of the engagement strategy. The project will:

- **Publish Key Documents:** Make available feasibility studies, assessment reports, and data-sharing protocols through accessible channels such as community centers and online portals.
- **Regular Public Reporting:** Hold periodic review meetings and public consultations to report on progress, share lessons learned, and adjust strategies as needed.
- **Inclusive Decision-Making:** Ensure that decision-making bodies include representatives from both the target groups and other potentially affected stakeholders, strengthening a collaborative approach to resolving issues and optimising project outcomes.

vi. Mainstreaming Gender

Gender equality and women's empowerment are cross-cutting priorities embedded across all outcomes of the project. The project recognises that climate-induced disasters, economic marginalisation, and energy poverty disproportionately affect women, girls, and marginalised groups due to entrenched gender norms, unequal access to resources, and limited participation in decision-making. Accordingly, the programme will adopt a gender-transformative approach that moves beyond participation targets to shift power dynamics, redistribute resources, and embed women's agency across resilience-building processes.

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A Gender Action Plan will be developed at project inception, informed by a participatory gender analysis and aligned with UNDP's Gender Equality Strategy (2022–2025). The plan will outline gender-responsive measures across all levels of implementation, including staffing, capacity-building, service delivery, and community engagement. It will identify gender-differentiated vulnerabilities and capacities and propose targeted actions to address the needs of women and girls, particularly those from rural, indigenous, or hazard-prone communities.

Gender considerations will be mainstreamed across the three transformative outcomes of the TIAEWS project and other projects:

- Under Outcome 1 (Early Warning Systems): Risk communication strategies will be co-designed with women, youth, and persons with disabilities to ensure messages are accessible, locally relevant, and actionable. Women will participate in mock drills and training sessions to strengthen their role in anticipatory action. Local women's groups will be engaged in last-mile dissemination efforts and the design of culturally responsive early warning content.
- Under Outcome 2 (Women's Economic Empowerment for Inclusive Recovery and Resilience): Women's access to productive assets, climate-smart skills, and inclusive financial services will be prioritised. Targeted livelihood restoration support, digital literacy training, and tailored micro-credit schemes will strengthen the autonomy of women-led enterprises. Women will also be connected to mentorship networks, cooperatives, and policy platforms to influence structural change and economic governance.
- Under Outcome 3 (Renewable Energy and Agricultural Transitions for Community Resilience): Renewable energy interventions will actively involve women as technicians, energy entrepreneurs, and co-managers of decentralised systems. Agri-voltaic pilots and demonstration plots will ensure women farmers have equal access to climate-smart technologies and extension services. Community hubs will serve as safe and inclusive spaces for women's training, peer learning, and leadership development.

Gender-disaggregated indicators will be used to monitor progress across outcomes, including income gains, leadership roles, and access to services. A minimum 40% participation rate for women will be targeted across all project activities, including training, community consultations, and governance bodies. Where possible, this will be complemented by qualitative monitoring to capture shifts in gender norms, voice, and agency.

Finally, all implementing partners will receive orientation on gender equality principles and must report on gender-related results. The project will draw on the technical guidance of UNDP's Gender Team and Gender Equality Seal framework to ensure that results are not only gender-sensitive, but also contribute to structural transformation and long-term resilience.

vii. South-South and Triangular Cooperation (SSC/TrC)[3]

South-South and Triangular Cooperation is a central enabler of the project's approach to resilience-building, drawing on shared experiences, tested innovations, and technical expertise from countries facing comparable development challenges. By facilitating the exchange of practical solutions between peer countries and catalysing support from international partners, SSC/TrC strengthens the project's ability to deliver locally adapted, scalable, and sustainable results across all outcomes.

South-South Cooperation (SSC) provides a platform for horizontal learning and collaboration, enabling Pakistan to adopt best practices from countries that have successfully implemented anticipatory early warning systems, resilient infrastructure, inclusive livelihood strategies, and decentralised renewable energy. Lessons from countries that have deployed IoT-enabled forecasting tools, culturally responsive risk communication systems, and gender-sensitive economic recovery models will inform the design and implementation of interventions, particularly in high-risk areas such as Gilgit-Baltistan.

Triangular Cooperation complements SSC by leveraging the convening power, technical expertise, and financial resources of international development partners—such as UNDP—to support and scale contextually relevant solutions. This includes facilitating joint research and innovation, developing data-sharing protocols, strengthening institutional systems, and embedding global best practices into national strategies. Through TrC, the project will also access

[3] *Please see Considerations for South-South and Triangular Cooperation Design, Implementation, and Documentation.*

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specialised technical assistance, quality assurance mechanisms, and platforms for continuous monitoring and evaluation.

SSC/TrC is embedded across all three outcomes of the project:

- **Outcome 1** benefits from regional knowledge on the integration of AI-powered forecasting, inter-agency coordination, and last-mile communication technologies.
- **Outcome 2** draws on peer-country models for inclusive financial services, women-led enterprise development, and climate-resilient livelihoods.
- **Outcome 3** leverages global experience in scaling climate-smart agriculture, off-grid renewable energy systems, and agri-voltaics, ensuring that technology adoption is both environmentally sustainable and economically viable.

Structured mechanisms such as peer learning exchanges, joint capacity-building initiatives, and virtual knowledge-sharing platforms will be used to facilitate ongoing collaboration. These channels will ensure that innovations are adapted to Pakistan's local context, continuously refined through feedback, and shared back into the global SSC knowledge ecosystem.

Ultimately, the strategic use of SSC/TrC positions the project to deliver more impactful, context-driven solutions while contributing to global cooperation and solidarity among developing countries. It reinforces mutual accountability, builds institutional capacity, and enhances the sustainability and replicability of results at national and regional levels.

viii. Digital Solutions[4]

The project leverages cutting-edge digital technologies as a core enabler to transform disaster risk management, economic recovery, and climate resilience initiatives. Central to this approach is the integration of data-driven digital platforms that not only enhance real-time monitoring and decision-making but also improve communication and service delivery for both beneficiaries and partners.

At the heart of the digital solution is a state-of-the-art Early Warning System (EWS) that uses EWS , Automatic Weather Stations, and hydrometric devices to collect high-precision, real-time data. This information is funneled into an AI-powered predictive analytics engine, which generates actionable forecasts. An interactive digital Dashboard consolidates these inputs, offering stakeholders a centralized, user-friendly interface to monitor hazards and coordinate timely responses. The system's design adheres to the principles outlined in "Embedding Digital in Project Design," ensuring interoperability, scalability, and data security, thereby facilitating collaboration among government agencies, technical experts, and local communities.

Digital communication plays a pivotal role in the project's strategy. Customised messaging systems are deployed across multiple channels, including SMS alerts, community radio broadcasts, and social media, ensuring that early warnings are delivered in local languages and tailored to cultural contexts. These digital channels not only increase the reach and clarity of communications but also foster community trust and engagement, particularly among vulnerable groups such as women, children, and individuals with disabilities.

In addition, digital solutions are integrated into capacity-building and economic empowerment initiatives. For instance, online platforms and mobile applications support targeted training sessions, digital literacy programs, and financial management workshops for women entrepreneurs. These digital tools enable remote learning and real-time feedback, enhancing participants' ability to access market opportunities and financial services. Furthermore, digital data management systems enable the tracking of key performance indicators, facilitating robust monitoring, evaluation, and adaptive management of project outcomes.

Digital technologies are also applied in the realm of climate-smart practices and renewable energy integration to complement these efforts. Field-level digital monitoring, including smart irrigation systems and IoT-enabled sensors, ensures that agricultural practices are both efficient and resilient. In parallel, digital platforms help manage and monitor

[4] *Please see the Guideline "Embedding Digital in Project Design".*

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off-grid renewable energy installations, providing continuous service delivery and operational sustainability in remote areas.

ix. Knowledge

The project will generate a suite of high-impact knowledge products that extend well beyond standard evaluation reports. These products are designed to capture, analyze, and disseminate both technical and experiential insights, thereby ensuring that the lessons learned benefit not only project stakeholders but also a broader national and international audience. The knowledge management strategy is embedded in every phase of the project, from initial feasibility studies and pilot tests to full-scale implementation, and leverages a diverse range of formats and media to maximise visibility and uptake.

One of the primary knowledge outputs will be a series of comprehensive publications. These will include technical reports such as the detailed feasibility study and assessment reports, which document the state-of-the-art methodologies used for advanced forecasting and real-time monitoring. Complementing these will be policy briefs and white papers that synthesise the project's findings and recommendations for enhancing disaster preparedness, gender-responsive economic empowerment, and climate resilience. By publishing these documents on open-access platforms and in industry journals, the project aims to create a lasting resource for policymakers, researchers, and practitioners.

In addition, the project will develop interactive knowledge platforms such as a real-time Dashboard that aggregates data from newly installed monitoring devices (e.g., Automatic Weather Stations, Hydrometric Stations, and Warning Posts). This dynamic tool not only supports decision-making during emergencies but also serves as a rich repository of empirical data, enabling continuous learning and research. An integrated database built on these data streams will facilitate advanced analytics and comparative studies, further amplifying the project's impact in the field of disaster risk reduction.

To ensure broad and effective dissemination of lessons learned, the project will produce a series of media products and training modules. These include multimedia presentations, video documentaries, and a series of online webinars and workshops that will be broadcast through community radio, social media channels, and dedicated project websites. These tools are designed to reach diverse audiences, including local communities, government agencies, and international partners, by providing culturally tailored, easy-to-understand content. Training manuals and toolkits will also be developed to support capacity building among government officials and community stakeholders, ensuring that best practices are institutionalised and replicated in future initiatives.

Moreover, knowledge sharing will be actively fostered through stakeholder workshops, mentorship programs, and peer-to-peer learning sessions. These events will serve as forums for discussing innovations in early warning systems, renewable energy integration, and sustainable agricultural practices. By fostering an open dialogue between project implementers and beneficiaries, the project will not only refine its methodologies in real time but also contribute valuable insights to the broader community working on climate resilience and economic recovery.

x. Sustainability and Scaling Up

The project’s design integrates a robust sustainability framework that ensures long-term impact and scalability across multiple dimensions. Central to this approach is the effective use of relevant national systems and a precise transition arrangement that sustains the achieved results and lays the groundwork for replicability and expansion across similar contexts. By embedding the project within existing institutional structures, leveraging cutting-edge technology, and fostering broad-based stakeholder ownership, the initiative is poised to transform disaster preparedness, economic resilience, and climate adaptation in a sustainable manner.

Institutional Commitment and National Ownership
At the heart of the sustainability strategy is a strong institutional commitment. The project aligns with national disaster management frameworks, including the National Disaster Management Authority (NDMA), the Pakistan Meteorological Department (PMD), and provincial and local government systems. These partnerships ensure that the project’s interventions become integral to the national early warning, disaster response, and economic recovery mechanisms. The project facilitates the transfer of technical expertise and operational responsibilities to national institutions through formal agreements and capacity-building initiatives, thereby promoting enduring national ownership. Regular joint

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reviews, stakeholder workshops, and inter-agency data-sharing protocols further ensure that the project's methodologies are institutionalised within existing governance frameworks.

Technical Sustainability
Technical sustainability is achieved by integrating state-of-the-art forecasting, monitoring, and communication technologies into national systems. The deployment of EWS, automatic weather stations, and renewable energy-powered communication nodes is not a standalone component but rather is designed to feed into an interactive, AI-based Dashboard managed by national agencies. This integration enables real-time monitoring, early warning dissemination, and coordinated disaster response, which can be maintained and upgraded over time. Continuous training programs and technical support from academic and research institutions ensure that local technicians and government personnel are well-equipped to manage and sustain these advanced systems.

Economic and Financial Sustainability
Economic sustainability is a cornerstone of the project's long-term impact. By establishing innovative financial mechanisms, such as green financing instruments, micro-credit schemes, and public–private partnerships, the project not only mobilises the necessary resources for initial implementation but also creates pathways for ongoing financial support. Local financial institutions are engaged to facilitate access to funds and provide tailored financial literacy programs, ensuring that beneficiaries can manage and grow their enterprises sustainably. This financial framework is further supported by aligning project outcomes with broader national economic recovery plans and sustainable development priorities, thereby embedding the project's initiatives into ongoing economic planning and development.

Environmental, Gender, and Social Sustainability
The project is designed with a holistic view of sustainability that extends beyond economic and technical dimensions. Environmentally, the integration of renewable energy systems and climate-smart agricultural practices contributes to reduced greenhouse gas emissions and improved resource efficiency, setting a replicable model for sustainable land use and energy management. Socially, the project emphasises gender-responsive programming and inclusive participation, ensuring that women, persons with disabilities, and marginalised groups benefit equitably. Targeted capacity-building, community-based interventions, and culturally tailored communication strategies empower these groups, promote gender equality, and enhance community resilience. These efforts are closely aligned with local development plans and national policies, thereby ensuring that the social benefits are sustained and scaled up through collaborative governance.

Scaling Up and Replicability
The scaling-up strategy is built on a phased transition arrangement, beginning with pilot projects and demonstrative initiatives that showcase tangible benefits. Once proven effective, these interventions will be integrated into national systems through formal policy adoption and dedicated funding channels. The project's rigorous monitoring and evaluation framework, featuring clear performance indicators and periodic assessments, will provide evidence-based insights for continuous improvement and replication. Lessons learned and best practices will be systematically documented and disseminated, facilitating cross-sectoral knowledge sharing and enabling other regions to adopt similar models. The creation of community hubs and long-term partnerships with academic, private, and civil society organisations further enhances the project's replicability, ensuring that successful interventions can be adapted and scaled up to address broader regional and national challenges.

Strengthening and Monitoring National Capacities
To cement sustainability, the project prioritises strengthening national capacities through comprehensive training programs, mentorship, and technical support initiatives. Local government officials, technical experts, and community leaders will receive ongoing training on the operational aspects of advanced forecasting tools, data management, and renewable energy systems. Performance is continuously monitored through baseline assessments, real-time data collection, and regular capacity-building evaluations, ensuring that the skills and knowledge remain up-to-date and responsive to evolving challenges. This continuous learning approach not only secures the long-term sustainability of the project's interventions but also builds a resilient framework for future innovations and adaptations.

IV. PROJECT MANAGEMENT

Cost Efficiency and Effectiveness

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The UNDP has been a long-term partner of the Government of Pakistan in strategic development work and enjoys a good working relationship with the government machinery, extending down to the district level. A few noteworthy attributes of UNDP which enhance its delivery effectiveness and cost efficiency are:

The UN in Pakistan has a significant advantage over other institutions which operate in development work. Its authority and legality are apparent through its long-term working relationship with the government and other stakeholders in the Country. The UNDP's ways of working, rules, regulations, and policies are not only aligned with global practices but also relevant to the country's context.

The UNDP's system, which includes a results-based framework for monitoring and a results and resources framework, ensures quality assurance and transparency. The programme will synergise with other interventions and ongoing projects to enhance cost-effectiveness in delivery, for example, through joint monitoring and evaluation, asset sharing, and coordination. Additionally, costing is performed based on valid estimates using benchmarks from similar projects. The cost implications for fluctuations in foreign exchange have been estimated and factored into the project budget.

According to the theory of change, the institutional capacities of governments at federal, provincial, and local levels will be enhanced, primarily through the mainstreaming of climate risk management in key sectors, to improve programmes and diverse strategies. This will not only strengthen capacities at the government level but will also increase investment by building new partnerships, including those with corporations, academia, and other key stakeholders.

The project is underpinned by a strong commitment to cost efficiency and effectiveness, ensuring that every resource is strategically deployed to achieve the envisaged outcomes. Guided by the UNDP's proven portfolio management approach, the project leverages tested interventions that address the unique challenges of climate-induced disasters. This approach will not only support immediate risk reduction and community resilience but also create scalable opportunities for future collaboration with the Government of Pakistan, civil society organisations, and other donor-funded initiatives in climate change adaptation, disaster risk reduction, and resilient livelihoods.

Project Management

The programme will be implemented through UNDP's direct implementation modality (DIM). Resilience, Environment and Climate Change Unit will ensure Quality assurance. UNDP will undertake the Project execution and implementation in accordance with UNDP Programme and Operations Policies and Procedures (POPP). The overall decision-making, including financial accountability, will rest with UNDP. The project will be executed in coordination with relevant partners at the national, provincial, and local levels to ensure that practical assistance reaches the targeted beneficiaries directly.

A Project Steering Committee (PSC) will guide and advise the implementation of the project. The Steering Committee will be chaired by the UNDP Resident Representative/DRR. The PSC will guide the project on policy and strategic matters and oversee implementation. PSC will meet once a year, and a session may be called as needed. The project will have a linear staff arrangement at UNDP CO, as given in the organogram below. The project team will facilitate work planning, monitoring, and programme technical backstopping for the implementing teams on a quarterly basis through review and planning meetings, field visits, and events. The project will operate within the overall framework of the UNDP Country Office, ensuring quality assurance and strategic leadership to align with the Country Programme Document.

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V. RESULTS FRAMEWORK[5]

Intended Outcome as stated in the UNSDCF/Country [or Regional] Programme Results and Resource Framework: By 2027, people living in the Indus River Basin, particularly the most vulnerable, including women, girls, boys, persons with special needs and senior citizens, will have their lives positively impacted by improved water access and utilization, economic development, livelihoods, climate-resilient settlements, and prosperity.
Outcome indicators as stated in the Country Programme [or Regional] Results and Resources Framework, including baseline and targets: (IRRF 4.1.1). Number of people directly benefiting from initiatives to protect nature and promote sustainable use of resources
Applicable Output(s) from the UNDP Strategic Plan: Building resilience to respond to systemic uncertainty and risk. Signature solutions 1, 3, 4, and 6.
Project title and Quantum Project Number: Enhancing Climate Resilience and Economic Recovery through Early Warning Systems, Women's Empowerment, and Sustainable Energy Solutions in Pakistan

Expected Outcomes & Outputs	**Output Indicators**	**Data Source**	**Baseline**		**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Data Collection Methods & Risks**
			Value	**Year**					
Outcome 1: Tailored Intelligence for Actionable Early Warning Systems (TIAEWS): Enhanced capacity of communities and institutions to anticipate and act on disaster risks through data-driven, inclusive early warning systems.									
Output 1.1: Streamlined data and information management system for Early Warning Systems (EWS), enabling timely and effective decision-making by government and key stakeholders	1.1.1 Feasibility Study Report produced	Consultancy report; field surveys	0 report	2025	1 report submitted	Report finalized and endorsed	N/A	N/A	Desk review; risk of consultancy delays and coordination issues
	1.1.2 Assessment Report & Data-Sharing Protocol developed and Stakeholder Training Sessions	Assessment report; stakeholder feedback	0 report/protocol	2025	1 report & protocol drafted and 1 stakeholder workshop + 2 training sessions (35 participants each)	Protocol fully endorsed with training completed. Additional/refresher training as needed	N/A	N/A	Field surveys; risk: inter-agency coordination challenges. Attendance sheets, evaluation surveys; risks: low turnout, scheduling conflicts
	1.1.3 Number of Monitoring Devices Operational (AWS, Hydrometric, Warning Posts)	Installation records; project monitoring	291 devices	2025	~330 (39 under TIAEWS) devices operational	361 (23 under TIAEWS) devices operational	N/A	N/A	Installation logs; risks: supply chain disruptions, technical issues

[5] UNDP publishes its project information (indicators, baselines, targets and results) to meet the International Aid Transparency Initiative (IATI) standards. Make sure that indicators are S.M.A.R.T. (Specific, Measurable, Attainable, Relevant and Time-bound), provide accurate baselines and targets underpinned by reliable evidence and data, and avoid acronyms so that external audience clearly understand the results of the project.

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Expected Outcomes & Outputs	Output Indicators	Data Source	Baseline		Year 1	Year 2	Year 3	Year 4	Data Collection Methods & Risks
			Value	Year					
Output 1.2: Enhanced communication and community engagement strategy for Early Warning Systems, ensuring widespread access to tailored decision intelligence	1.2.1 Communication Plan & Media Materials (in ≥4 local languages) developed	Communication plan document; media reports	0	2025	Plan developed and initial media dissemination	Ongoing dissemination; ≥80% community coverage	N/A	N/A	Media monitoring; risks: low adoption, cultural/language barriers
	1.2.2 Number of Community Drills/Training Sessions	Training session records	0 sessions	2025	28 sessions	28 sessions (Total 56 sessions)	N/A	N/A	Session records; risks: weather delays, low participation
	1.2.3 Coverage of Early Warnings (% of target communities reached)	Household surveys; communication logs	30% coverage	2025	60% coverage	80% coverage	N/A	N/A	Surveys, focus group discussions; risks: data inaccuracies, cultural barriers
	1.2.4 Number of promotions ads on TC, Radio and print media and social media	Media Campaigns	0	2025	5 TV promotion ads, 5 Radio messages, 5 printed media ads and social media posts in different languages	-	N/A	N/A	Coverage in rural areas. Cultural barriers
Output 1.3: Improve national and sub-national institution's capacities through knowledge exchange and capacity building programme for effective coordination and cross-learning	1.3.1 Data-Sharing Protocol Developed & Endorsed	Official documents; meeting minutes	0	2025	1 protocol developed	Full implementation and periodic review	N/A	N/A	Documentation review; risks: bureaucratic delays, poor inter-agency coordination
Outcome 2: Women's Economic Empowerment for Inclusive Recovery and Resilience: Strengthened livelihoods, financial inclusion, and market access for women and marginalised groups, positioning them as leaders in driving inclusive economic recovery, climate-smart enterprise, and community resilience.									

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Expected Outcomes & Outputs	Output Indicators	Data Source	Baseline		Year 1	Year 2	Year 3	Year 4	Data Collection Methods & Risks
			Value	Year					
Output 2.1: Targeted Livelihood Recovery & Asset Restoration	2.1.1 Number of Livelihood Assessments Conducted	Assessment reports; field surveys	0	2025	1 comprehensive assessment	Updated/validated assessment as required	Dissemination of assessment	N/A	Surveys; risks: low community engagement
	2.1.2 Volume & Value of In-Kind Support Distributed	Distribution records; financial reports	0 support	2025	Support provided to ~50 women-led enterprises	Support extended to ~100 enterprises	Support provided to ~20 women-led enterprises	Supported to ~10 women-led enterprises	Distribution tracking; risks: logistical delays, misallocation
	2.1.3 % Restoration in Productive Capacity among Women-led Enterprises	Follow-up surveys; performance data	0%	2025	30% restoration	10% restoration	30% restoration	30% restoration	Pre/post assessments; risks: external economic factors, inadequate follow-up
Output 2.2: Enhanced women's economic agency through financial inclusion and integrated skills development.	2.2.1 Number of Training Sessions & Workshops Conducted	Training records; event reports	0 sessions	2025	-	10 additional sessions (cumulative ~15 sessions)	5 sessions	3 sessions	Attendance records; risks: low participation, scheduling issues
	2.2.2 % Improvement in Business Management & Digital Literacy Skills	Pre/post training evaluations	Baseline score (e.g., 50%)	2025	-	30% improvement	30% improvement	20% improvement	Evaluation tests; risks: variation in engagement, testing biases
	2.2.3 Uptake of Micro-Credit & Financial Services (Beneficiary Count)	Financial institution reports; surveys	0 beneficiaries	2025	-	200 beneficiaries	100 beneficiaries		Financial tracking; risks: delays in loan disbursement, administrative challenges
Output 2.3: Strengthened inclusive markets, policy advocacy,	2.3.1 Number of Networking & Mentorship Events Held	Event records; attendance sheets	0 events	2025	-	5 events	5 events	2 additional events	Event feedback; risks: low participation, logistical issues

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Expected Outcomes & Outputs	Output Indicators	Data Source	Baseline		Year 1	Year 2	Year 3	Year 4	Data Collection Methods & Risks
			Value	Year					
and community resilience networks driven by women's leadership	2.3.2 Number of Policy Dialogues Held & Documented Recommendations	Meeting minutes; policy reports	0 dialogues	2025	-	1 additional dialogue	2 dialogues	1 additional dialogue	Documentation review; risks: political sensitivities, stakeholder disengagement
	2.3.3 Number of Community Hubs Established	Project reports; site inspections	0 hubs	2025	-	1 hub established	1 hub established	Coordination of 2 hubs	Site visits; risks: infrastructure delays, funding constraints
Outcome 3 – Renewable Energy and Agricultural Transitions for Community Resilience: Increased and accelerated women-led and community-based adoption of decentralised renewable energy and climate-smart agriculture to enhance productivity, sustainability, and resilience.									
Output 3.1: Increased adoption of climate-resilient agricultural practices and water management among smallholder farmers.	3.1.1 Number of Demonstration Plots Established	Field reports; photographic evidence	0 plots	2025	-	10 plots	5 plots total	5 plots total	Field verification; risks: land access issues, adverse weather
	3.1.2 % Increase in Crop Yields/Agricultural Incomes	Agricultural surveys; yield data	Baseline (100%)	2025	-	20% increase	30% increase	40% increase	Yield monitoring; risks: climate variability, market fluctuations
	3.1.3 Number of Farmer Training Sessions Conducted	Training records; farmer feedback	0 sessions	2025	-	4 additional sessions	4 additional sessions	4 additional sessions	Training evaluations; risks: low attendance, resource limitations
Output 3.2: Strengthened post-disaster economic recovery and revitalisation of local markets.	3.2.1 Number of Small/Micro-Enterprises Revived or Newly Created	Business registry; survey data	0 enterprises	2025	-	500 enterprises	500 enterprises	500 enterprises	Business surveys; risks: economic instability, market challenges
	3.2.2 % Improvement in Local Market Performance (Market Index)	Market surveys; economic reports	Baseline index (e.g., 50)	2025	-	Increase to 75	Increase to 80	Increase to 100	Economic surveys; risks: external shocks, data collection issues
	3.2.3 Number of Local Cooperatives Established	Project reports; field verification	0 cooperatives	2025	-	10 cooperative	5 cooperative	5 cooperative	Field visits; risks: organizational challenges, funding delays

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Expected Outcomes & Outputs	Output Indicators	Data Source	Baseline		Year 1	Year 2	Year 3	Year 4	Data Collection Methods & Risks
			Value	Year					
Output 3.3: Strengthened inclusive energy governance, financing mechanisms, and productive use integration.	3.3.1 Number of Households/Facilities Connected to Off-Grid Renewable Energy Systems	Installation records; utility reports	0 connections	2025	-	100 households	50 households	50 households	Installation logs; risks: technical challenges, equipment delays
	3.3.2 Total Renewable Capacity Installed (kW)	Technical reports; system logs	0 kW	2025	-	250 kW	250 kW	250 kW	Technical monitoring; risks: procurement issues, installation delays
	3.3.3 Number of Technical Training Sessions on Renewable Energy	Training records; certification reports	0 sessions	2025	-	5 sessions	5 sessions	5 sessions	Training evaluations; risks: low participation, limited technical expertise

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VI. MONITORING AND EVALUATION

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans:

Monitoring Plan

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost (if any)
Track results progress	Progress data against the activity indicators of the project will be collected and analyzed to assess the progress of the project against agreed outputs and achievements.	Quarterly, or as required for each indicator	Slower than expected progress will be addressed by project management. Agreements with NGOs engaged under the project as Responsible Parties will include detailed deliverable and corresponding payment schedules. These will be tracked continuously to ensure no slippage in delivery. Spot checks will be undertaken by a Project Engineer for community infrastructure repair/restoration. Mechanisms will be put in place to capture community/citizen feedback on services provided to them by the project.	-	-
Monitor and Manage Risk	Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. This includes monitoring measures and plans that may have been required as per UNDP's Social and Environmental Standards. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk. UNDP believes in strong results-based management and accountability mechanisms and has developed systems accordingly. Throughout the project, the Country Office Monitoring and Evaluation (M&E) unit will remain actively involved in monitoring the progress and quality of the implementation process. In this regard, the M&E team will develop tools for progress monitoring against the project targets and hold continuous discussions with partners and train them on the respective tools and reporting standards.	Quarterly	Risks are identified by project management and actions are taken to manage risk. The risk log will be actively maintained to keep track of identified risks and actions taken. A Monitoring and Reporting Specialist will be brought on board as a core member of the project team to support monitoring of the workplan, progress under Responsible Party Agreements, consultant deliverables; and reporting to the various donors according to respective donor requirements. A third-party monitoring expert or consulting firm will be engaged on a retainer basis to monitor and verify the quality and deliverables of Responsible Parties and contractors. A Social and Environmental Standards /Risk will be engaged on a retainer basis to monitor SES risks and mitigation strategies.	-	-

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Learn	Knowledge, good practices and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project.	Annually	Relevant lessons are captured by the project team and used to inform management decisions to ntegrate lessons into project decision-making.	-	-
Annual Project Quality Assurance	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project.	Over the period of after every 2 years of implementation	Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance.	-	-
Review and Make Course Corrections	Internal review of data and evidence from all monitoring actions to inform decision making.	Annually	Discuss performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.	-	-
Project Report	A progress report will be presented to the Project Board and key stakeholders, consisting of progress data showing the results achieved against pre-defined annual targets at the output level, the annual project quality rating summary, an updated risk long with mitigation measures, and any evaluation or review reports prepared over the period.	Annually, and final report at project completion	Review and disseminate findings to stakeholders.	-	-
Project Review (Project Board)	The project's governance mechanism (i.e., project board) will hold regular project reviews to assess the performance of the project and review the Multi-Year Work Plan to ensure realistic budgeting over the life of the project. In the project's final year, the Project Board shall hold an end-of project review to capture lessons learned and discuss opportunities for scaling up and to socialize project results and lessons learned with relevant audiences.	At least annually and as needed	Any quality concerns or slower than expected progress should be identify as quality concerns and discussed by the project board and management actions agreed to address the issues identified.	-	-

Evaluation Plan[6]

Evaluation Title	Partners (if joint)	Related Strategic Plan Output	UNSDCF/CPD Outcome	Planned Completion Date	Key Evaluation Stakeholders	Cost and Source of Funding
Final Evaluation	-	As per final project outputs	Outcome 3: Climate Change, Resilience and Environment	February 2028	All levels of Government; CSOs; UNDP; Donor partners (similar to mid-term)	(20,000 USD)TBD

[6] Optional, if needed

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VII. MULTI-YEAR WORK PLAN [78]

EXPECTED OUTPUTS	PLANNED ACTIVITIES	Planned Budget by Year				RESPONSIBLE PARTY	PLANNED BUDGET		
		2025	2026	2027	2028		Funding Source	Budget Description	Amount (USD)
Outcome 1: Tailored Intelligence for Actionable Early Warning Systems (TIAEWS): Enhanced capacity of communities and institutions to anticipate and act on disaster risks through data-driven, inclusive early warning systems.									
Output 1.1: Streamlined data and information management system for Early Warning Systems (EWS), enabling timely and effective decision-making by government and key stakeholders	1.1.1. Conduct a detailed feasibility study for the installation of EWS/AWS equipment and devices in 14 districts of Gilgit-Baltistan	84,710	120,000	84,710	150,000	UNDP	GDF – 84,710 Un-Funded - 84,710	71300 - National Consultant 71600 -Travel	439,420
	1.1.2. Establish protocols for data sharing and collaboration among relevant government agencies and stakeholders, and development of Dashboard for the information dissemination gathered from EWS.	72,350	220,000	–	–	UNDP	GDF – 72,350 Un-Funded – 220,000	71300 - National Consultant 75700 - Training, Workshops and Confer	292,350
	1.1.3. Procurement and installation of hydrometer stations, automatic weather stations (AWS), and warning posts in high-risk areas of Gilgit-Baltistan (GB)	3,068,900	900,000	250,000	264,087	UNDP	GDF – 3,068,900 Un-funded – 1,414,087	72100-Contractual Services-Companies 71600 -Travel	4,482,987

[7] Cost definitions and classifications for programme and development effectiveness costs to be charged to the project are defined in the Executive Board decision DP/2010/32

[8] Changes to a project budget affecting the scope (outputs), completion date, or total estimated project costs require a formal budget revision that must be signed by the project board. In other cases, the UNDP programme manager alone may sign the revision provided the other signatories have no objection. This procedure may be applied for example when the purpose of the revision is only to re-phase activities among years.

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Output 1.2: Enhanced communication and community engagement strategy for Early Warning Systems, ensuring widespread access to tailored decision intelligence	1.2.1 Develop and disseminate early warning messages in local languages through multiple channels (e.g., radio, SMS, public announcements).	15,000	55,000	60,000	56,900	UNDP	GDF – 15,000 Un-funded – 171,900	71300 - National Consultant	186,900
	1.2.2 Conduct community preparedness training and mock drills to familiarise at-risk groups with emergency protocols.	112,000	150,000	250,000	200,000	UNDP	GDF – 112,000 Un-funded – 600,000	71300 - National Consultant 75700 - Training, Workshops and Confer	712,000
	1.2.3. Design and produce gender inclusive communication materials such as pamphlets, posters, and digital content (Radio, SMS, social media, TV) tailored to different demographic groups, literacy levels, and local languages.	38,000	75,000	65,000	70,000	UNDP	GDF – 38,000 Un-funded – 210,000	71300 - National Consultant	248,000
	1.2.4: Implement a communication campaign to test the effectiveness of selected communication strategies and materials	-	307,500	55,000	80,000	UNDP	GDF – 87,500 Un-funded – 355,000	71300 - National Consultant 71600 -Travel	442,500
Output 1.3: Improve national and sub-national institution's capacities through knowledge exchange and capacity building programme for effective coordination and cross-learning	1.3.1 Improve national and sub-national institutions' capacities through South-South, Triangular Knowledge Exchange and Capacity Building programme for effective	-	154,200	35,000	55,000	UNDP	GDF – 9,800 Un-funded – 214,400	75700 - Training, Workshops and Confer	244,200

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	coordination and cross-learning.								
Sub-Total Output 1		**3,390,960**	**1,981,700**	**799,710**	**875,987**				**7,048,357**
Outcome 2: Women's Economic Empowerment for Inclusive Recovery and Resilience: Strengthened livelihoods, financial inclusion, and market access for women and marginalised groups, positioning them as leaders in driving inclusive economic recovery, climate-smart enterprise, and community resilience.									
Output 2.1: Targeted Livelihood Recovery & Asset Restoration	2.1.1. Conduct gender-sensitive assessments to map asset losses, operational challenges, and support needs of women-led enterprises in target communities.		250,000	–	–	UNDP	TBC	71300 - National Consultant 71600 -Travel	250,000
	2.1.2. Distribute in-kind livelihood support (e.g. agricultural tools, fertilisers, and kits) to resume and diversify income-generating activities, including climate-smart agricultural practices and renewable energy technologies.		800,000	400,000	400,000	UNDP		72100-Contractual Services-Companies	1,600,000
	2.1.3. Provide follow-up support and technical assistance to restore productive capacity.	-	300,000	350,000	250,000	UNDP		75700 - Training, Workshops and Confer 71600 -Travel	900,000
Output 2.2: Enhanced women's economic agency through financial inclusion	2.2.1. Conduct training needs assessments to identify capacity gaps in entrepreneurship, digital	-	200,000	350,000	200,000	UNDP	TBC	71300 - National Consultant	750,000

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and integrated skills development.	literacy, renewable energy, and climate-resilient agriculture.							74200 - Audio Visual&Print Prod Costs	
	2.2.2. Deliver targeted training in entrepreneurship, digital marketing, and sustainable agricultural and renewable energy practices through workshops and hands-on sessions.	-	150,000	250,000	100,000	UNDP		75700 - Training, Workshops and Confer 74200 - Audio Visual&Print Prod Costs	500,000
	2.2.3. Facilitate access to micro-credit and deliver financial literacy training, supporting renewable energy and climate-smart agricultural activities.	-	200,000	250,000	50,000	UNDP		71300 - National Consultant 75700 - Training, Workshops and Confer	500,000
Output 2.3: Strengthened inclusive markets, policy advocacy, and community resilience networks driven by women's leadership	2.3.1. Organize events to connect women entrepreneurs with mentors and buyers.	-	200,000	120,000	35,000	UNDP	TBC	75700 - Training, Workshops and Confer 71600 -Travel	255,000
	2.3.2. Conduct policy dialogues and advocacy engagements to promote gender-responsive economic reforms and access to renewable energy.	-	80,000	70,000	21,800	UNDP		75700 - Training, Workshops and Confer 71600 -Travel 74200 - Audio Visual&Print Prod Costs	171,800
	2.3.3. Establish community-based hubs led by women as centres of excellence for training, enterprise	-	120,000	100,000	20,000	UNDP		72100-Contractual Services-Companies	240,000

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	incubation, renewable energy awareness, and climate-smart agricultural practices.							75700 - Training, Workshops and Confer	
Sub-Total Output 2		**-**	**1,000,000**	**620,000**	**320,000**				**5,166,800**
Outcome 3 – Renewable Energy and Agricultural Transitions for Community Resilience: Increased and accelerated women-led and community-based adoption of decentralised renewable energy and climate-smart agriculture to enhance productivity, sustainability, and resilience.									
Output 3.1: Increased adoption of climate-resilient agricultural practices and water management among smallholder farmers.	3.1.1. Conduct gender-responsive agricultural vulnerability assessments and identify priority intervention zones using remote sensing and stakeholder consultations.	–	300,000	450,000	250,000	UNDP	TBC	72100-Contractual Services-Companies 75700 - Training, Workshops and Confer	1,000,000
	3.1.2.Establish demonstration plots and facilitate hands-on farmer training to farmers to promote best practices in climate-smart agriculture and efficient water use.	–	200,000	350,000	250,000	UNDP		75700 - Training, Workshops and Confer 71300 - National Consultant	800,000
	3.1.3. Conduct training sessions on sustainable farming and efficient water use.	–	150,000	250,000	–	UNDP		75700 - Training, Workshops and Confer 71600 -Travel	500,000
Output 3.2: Strengthened post-disaster economic recovery and revitalisation of local markets.	3.2.1. Provide business support and technical assistance for enterprise revival.	–	400,000	200,000		UNDP	TBC	72600 – Grants 75700 - Training, Workshops and Confer	715,000
	3.2.2. Implement market assessments and promotional activities.	–	150,000	150,000		UNDP		75700 - Training, Workshops and Confer	410,000

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								74200 - Audio Visual&Print Prod Costs	
	3.2.3. Facilitate the formation of cooperatives to enhance market linkages.	–	80,000	100,000	–	UNDP		72100-Contractual Services-Companies	285,126
Output 3.3: Strengthened inclusive energy governance, financing mechanisms, and productive use integration.	3.3.1. Establish gender-inclusive governance structures for renewable energy systems, ensuring women's leadership and representation	–	500,000	350,000	100,000	UNDP	TBC	72100-Contractual Services-Companies 74200 - Audio Visual&Print Prod Costs	950,000
	3.3.2. Procure and install renewable energy equipment to achieve targeted kW capacity.	–	380,000	280,000	100,000	UNDP		72100-Contractual Services-Companies	780,000
	3.3.3. Integrate renewable energy solutions into agricultural value chains and small businesses, explicitly supporting women-led enterprises.	–	100,000	68,900	50,000	UNDP		75700 - Training, Workshops and Confer 74200 - Audio Visual&Print Prod Costs	218,900
Sub-Total Output 3		**-**	**2,260,000**	**2,198,900**	**1,200,126**				**5,659,026**
Project Management and Monitroing Cost									
Evaluation	Conduct independent evaluations, continuous monitoring and periodic reviews.	15,000	100,000	100,000	100,000	UNDP	GDF – 15,000 Un-funded – 300,000	74100 - Professional Services	315,000
Project Operations and Management Cost	Provide overall project management, HR, procurement, finance and	288,322	722,109	615,108	444,468	UNDP	GDF – 288,322 Un-funded – 1,781,685	71400 - Contractual Services – Individ	2,070,007

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	audit, Donor Technical Support							71600 – Travel 73100 - Rental & Maintenance-Premises 74500 - Miscellaneous Expenses 72200 - Equipment and Furniture	
General Management Support	GMS and Misc cost	184,028	400,847	400,847	400,847	UNDP	GDF – 184,028 Un-funded – 1,202,542	74500 - Miscellaneous Expenses	1,386,570
Sub-Total Output 3		**487,350**	**4,692,956**	**4,263,755**	**2,630,567**				**3,771,577**
Grand Total		**3,975,010**	**11,037,956**	**9,152,365**	**5,783,480**				**21,645,760**

Consolidated Budget Summary

- Outcome 1 Total: 7,048,357 USD
- Outcome 2 Total: 5,166,800 USD
- Outcome 3 Total: 5,659,026 USD
- Evaluation: 3,771,577 USD

Total Project Budget (Approx.): 21,645,760 USD

Budget Notes:

1. **Budget Allocation:** All figures represent fully costed estimates covering both programmatic activities and necessary operational support (e.g., communications, HR, procurement, policy advisory, audit, and management functions).

2. **GMS Calculation:** The General Management Support budget has been calculated separately and includes HR and other support costs required for successful project execution.

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3. **Implementation & Monitoring:** Regular monitoring (through field visits, surveys, and desk reviews) will ensure that each activity meets its targeted outputs and that any risks (such as delays, coordination challenges, or technical issues) are promptly addressed.
4. **Funding Source:** For this plan, all activities are assumed to be financed under UNDP Project Funds; any additional co-financing or donor contributions will be integrated as applicable.

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VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

The Project Board is the most senior, dedicated oversight body for a UNDP 'Development Project', which is defined in the PPM as an instrument where UNDP "Delivers outputs where UNDP has accountability for design, oversight and quality assurance of the entire project."

Duties and Responsibilities

The two prominent, mandatory roles of the Project Board are as follows:

1) **High-level oversight of the project** (as explained in the "Provide Oversight" section of the PPM). This is the primary function of the Project Board. The Project Board reviews evidence of project performance based on monitoring, evaluation and reporting, including progress reports, monitoring missions' reports, evaluations, risk logs, quality assessments, and the combined delivery report. The Project Board is the main body responsible for taking corrective actions as needed to ensure the project achieves the desired results. And its function includes oversight of annual (and as-needed) assessments of any major risks to the programme or project, and related decisions/agreements on any management actions or remedial measures to address them effectively.

   The Project Board also carries the role of quality assurance of the project taking decisions informed by, among other inputs, the project quality assessment. In this role the Board is supported by the quality assurer, whose function is to assess the quality of the project against the corporate standard criteria. This function is performed by a UNDP programme or monitoring and evaluation officer to maintain independence from the project manager regardless of the project's implementation modality.

   The Project Board reviews updates to the project risk log.

2) **Approval of key project execution decisions** (as explained in the "Manage Change" section of the PPM). The Project Board has an equally important, secondary role in approving certain adjustments above provided tolerance levels, including substantive programmatic revisions (major/minor amendments), budget revisions, requests for suspension or extension and other major changes (subject to additional funding partner/donor requirements).

   The Project Board is responsible for making management decisions by consensus when required, including the approval of project plans and revisions, and the project manager's tolerances. The Project Board approves annual work plans and reviews updates to the project risk log.

   In order to ensure UNDP's ultimate accountability, Project Board decisions shall be made in accordance with the Quality Standards for Programming that ensure management for development results, best value money, fairness, integrity, transparency and effective national and international competition. The Board will be guided by credible data, evidence, quality assurance and reporting to aid decision making. The project Board will also exercise adaptive management as and when required to respond to newly emerging project circumstances - both opportunities and threats for the project- that may involve adjustment to the approved workplan and/or approach.

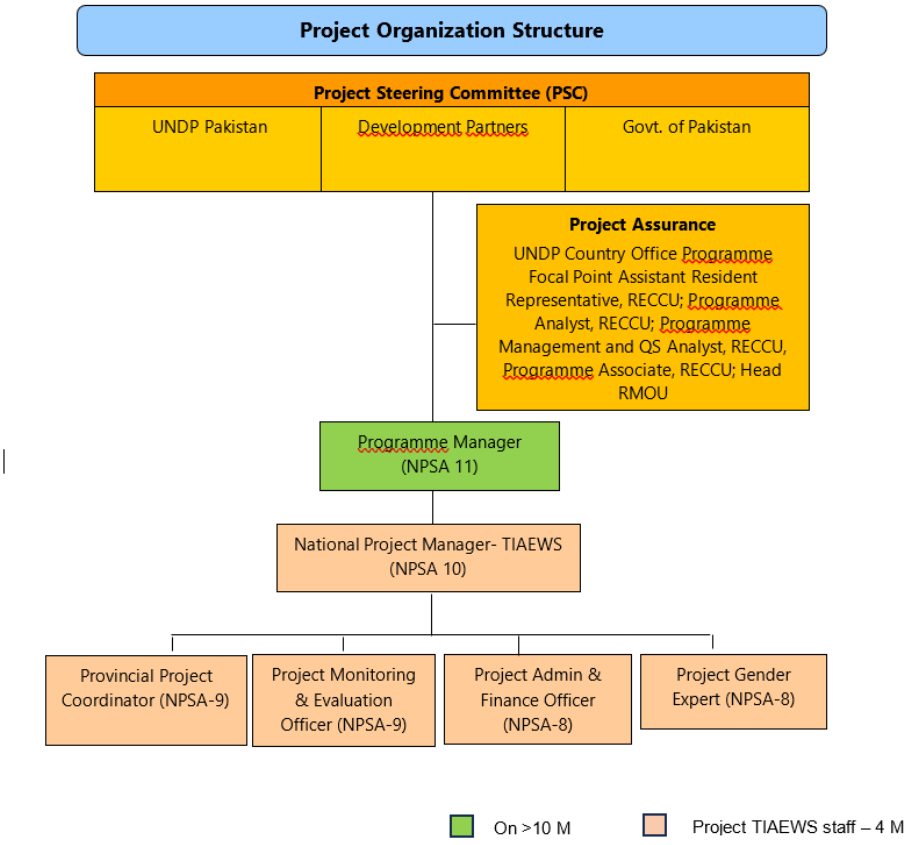
Within the overall governance and management arrangements of the project, the role of the Project Board as regards these two key functions *('High-level oversight of the project' and 'Approval of key project execution decisions')* is distinct from the roles of entities involved in the implementation of the project, namely Responsible Parties (if applicable), service providers and project staff.

Tolerance

The programme has a budget tolerance of 10%, reallocation of the budget among the outputs resulting in a deviation of 10% of the agreed budget will be approved by UNDP in advance. As per the agreed requirements of UNDP outlined In the UNDP POPP, the project board will agree on the tolerance level for the budget under the overall work plan allowing the programme manager to utilize the budget up to the tolerance level without the intervention from the project board. If the tolerance is exceeded beyond the agreed level the matter must be referred to the project board. The programme completion will be as per the requirements highlighted in the UNDP POPP. The extensions in programme closure timeline will require further consultation with UNDP.

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Board composition is as follows:



IX. LEGAL CONTEXT

The project document shall be the instrument envisaged and defined in the Supplemental Provisions to the Project Document, attached hereto and forming an integral part hereof, as "the Project Document".

This project will be implemented by UNDP ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

X. RISK MANAGEMENT

UNDP (DIM)

1. UNDP as the Implementing Partner will comply with the policies, procedures and practices of the United Nations Security Management System (UNSMS).
2. UNDP as the Implementing Partner will undertake all reasonable efforts to ensure that none of the project funds are used to provide support to individuals or entities associated with terrorism , that the recipients of any amounts provided by UNDP hereunder do not appear on the United Nations Security Council Consolidated Sanctions List, and that no UNDP funds received pursuant to the Project Document are used for money laundering activities. The United Nations Security Council Consolidated Sanctions List can be accessed via https://www.un.org/securitycouncil/content/un-sc-consolidated-list This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

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3. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards http://www.undp.org/ses and related Accountability Mechanism http://www.undp.org/secu-srm .
4. UNDP as the Implementing Partner will: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.
5. In the implementation of the activities under this Project Document, UNDP as the Implementing Partner will handle any sexual exploitation and abuse ("SEA") and sexual harassment ("SH") allegations in accordance with its regulations, rules, policies and procedures.
6. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.
7. UNDP as the Implementing Partner will ensure that the following obligations are binding on each responsible party, subcontractor, and sub-recipient:

a. Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, the responsibility for the safety and security of each responsible party, subcontractor and sub-recipient and its personnel and property, and of UNDP's property in such responsible party's, subcontractor's and sub-recipient's custody, rests with such responsible party, subcontractor and sub-recipient. To this end, each responsible party, subcontractor and sub-recipient shall:
   i. put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
   ii. assume all risks and liabilities related to such responsible party's, subcontractor's and sub-recipient's security, and the full implementation of the security plan.

b. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the responsible party's, subcontractor's and sub-recipient's obligations under this Project Document.

c. Each responsible party, subcontractor and sub-recipient (each a "sub-party" and together "sub-parties") acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the sub-parties, and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.
   (a) In the implementation of the activities under this Project Document, each sub-party shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").
   (b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, each sub-party, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment. SH may occur in the workplace or in connection with work. While typically involving a pattern of conduct, SH may take the form of a single incident. In assessing the reasonableness of expectations or perceptions, the perspective of the person who is the target of the conduct shall be considered.

d. In the performance of the activities under this Project Document, each sub-party shall (with respect to its own activities), and shall require from its sub-parties (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, sub-parties will and will require that their respective sub-parties will take all appropriate measures to:
   (i) Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;

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(ii) Offer employees and associated personnel training on prevention and response to SH and SEA, where sub-parties have not put in place its own training regarding the prevention of SH and SEA, sub-parties may use the training material available at UNDP;
(iii) Report and monitor allegations of SH and SEA of which any of the sub-parties have been informed or have otherwise become aware, and status thereof;
(iv) Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and
(v) Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. Each sub-party shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the relevant sub-party shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

e. Each sub-party shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the relevant sub-party to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.
f. Each responsible party, subcontractor and sub-recipient will ensure that any project activities undertaken by them will be implemented in a manner consistent with the UNDP Social and Environmental Standards and shall ensure that any incidents or issues of non-compliance shall be reported to UNDP in accordance with UNDP Social and Environmental Standards.
g. Each responsible party, subcontractor and sub-recipient will take appropriate steps to prevent misuse of funds, fraud, corruption or other financial irregularities, by its officials, consultants, subcontractors and sub-recipients in implementing the project or programme or using the UNDP funds. It will ensure that its financial management, anti-corruption, anti-fraud and anti money laundering and countering the financing of terrorism policies are in place and enforced for all funding received from or through UNDP.
h. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to each responsible party, subcontractor and sub-recipient: (a) UNDP Policy on Fraud and other Corrupt Practices (b) UNDP Anti-Money Laundering and Countering the Financing of Terrorism Policy; and (c) UNDP Office of Audit and Investigations Investigation Guidelines. Each responsible party, subcontractor and sub-recipient agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.
i. In the event that an investigation is required, UNDP will conduct investigations relating to any aspect of UNDP programmes and projects. Each responsible party, subcontractor and sub-recipient will provide its full cooperation, including making available personnel, relevant documentation and granting access to its (and its consultants', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with it to find a solution.
j. Each responsible party, subcontractor and sub-recipient will promptly inform UNDP as the Implementing Partner in case of any incidence of inappropriate use of funds, or credible allegation of fraud, corruption other financial irregularities with due confidentiality.
Where it becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, each responsible party, subcontractor and sub-recipient will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). It will provide regular updates to the head of UNDP in the country and OAI on the status of, and actions relating to, such investigation.
UNDP will be entitled to a refund from the responsible party, subcontractor or sub-recipient of any funds provided that have been used inappropriately, including through fraud, corruption, other financial irregularities, or otherwise paid other than in accordance with the terms and conditions of this Project Document. Such amount may be deducted by UNDP from any payment due to the responsible party, subcontractor or sub-recipient under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail any responsible party's, subcontractor's or sub-recipient's obligations under this Project Document.

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Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

k. Each contract issued by the responsible party, subcontractor or sub-recipient in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from it shall cooperate with any and all investigations and post-payment audits.
l. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project or programme, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.
m. Each responsible party, subcontractor and sub-recipient shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to its subcontractors and sub-recipients and that all the clauses under this section entitled "Risk Management Standard Clauses" are adequately reflected, *mutatis mutandis*, in all its sub-contracts or sub-agreements entered into further to this Project Document.

XI. ANNEXES

ANNEX I
PROJECT QA ASSESSMENT - DESIGN AND APPRAISAL

ANNEX19: UNDP PROJECT QUALITY ASSURANCE REPORT				
OVERALL PROJECT				
EXEMPLARY (5) ◎◎◎◎◎	**HIGHLY SATISFACTORY (4)** ◎◎◎◎○	**SATISFACTORY (3)** ◎◎◎○○	**NEEDS IMPROVEMENT (2)** ◎◎○○○	**INADEQUATE (1)** ◎○○○○
At least four criteria are rated Exemplary, and all criteria are rated High or Exemplary.	All criteria are rated Satisfactory or higher, and at least four criteria are rated High or Exemplary.	At least six criteria are rated Satisfactory or higher, and only one may be rated Needs Improvement. The Principled criterion must be rated Satisfactory or above.	At least three criteria are rated Satisfactory or higher, and only four criteria may be rated Needs Improvement.	One or more criteria are rated Inadequate, or five or more criteria are rated Needs Improvement.
DECISION				
• **APPROVE** – the project is of sufficient quality to be approved in its current form**.** Any management actions must be addressed in a timely manner. • **APPROVE WITH QUALIFICATIONS** – the project has issues that must be addressed before the project document can be approved. Any management actions must be addressed in a timely manner. • **DISAPPROVE** – the project has significant issues that should prevent the project from being approved as drafted.				
RATING CRITERIA **For all questions, select the option that best reflects the project**				
STRATEGIC				
1. Does the project specify how it will contribute to higher level change through linkage to the programme's Theory of Change? • **3:** The project is clearly linked to the programme's theory of change. It has an explicit change pathway that explains how the project will contribute to outcome level change and why the project's strategy will likely lead to this change. This analysis is backed by credible evidence of what works effectively in this context and includes assumptions and risks. • **2:** The project is clearly linked to the programme's theory of change. It has a change pathway that explains how the project will contribute to outcome-level change and why the project strategy will likely lead to this change. • **1:** The project document may describe in generic terms how the project will contribute to development results, without an explicit link to the programme's theory of change.		3	2 1	**Evidence:** Project Document (pp. 2–3, 6–7, 10): The ProDoc outlines a comprehensive Theory of Change, asserting that resilience cannot be achieved through singular measures but through interlinked investments in anticipatory systems, inclusive economic empowerment, and renewable energy. It details how improved early warning systems, gender-responsive livelihood support, and decentralised energy access will collectively enhance resilience. Pathways are mutually reinforcing, grounded in structured

**Note: Projects not contributing to a programme must have a project-specific Theory of Change. See alternative question under the lightbulb for these cases.*	needs assessments and informed by prior UNDP initiatives.
2. Is the project aligned with the UNDP Strategic Plan? **3:** The project responds to at least one of the development settings as specified in the Strategic Plan[1] and adapts at least one Signature Solution[2]. The project's RRF includes all the relevant SP output indicators. *(all must be true)* **2:** The project responds to at least one of the development settings as specified in the Strategic Plan[4]. The project's RRF includes at least one SP output indicator, if relevant. *(both must be true)* **1:** The project responds to a partner's identified need, but this need falls outside of the UNDP Strategic Plan. Also select this option if none of the relevant SP indicators are included in the RRF.	3 | 2 | 1 **Evidence** The project is strongly aligned with the UNDP Strategic Plan 2022–2025, particularly within **Development Setting 3** ("Building resilience to shocks and crises") and the Signature Solutions on **Climate Resilience (SS3)** and **Energy (SS4)**. The Results Framework (pp. 25–28) includes indicators that are directly aligned with Strategic Plan outputs related to resilience-building, early warning systems, women's empowerment, and sustainable energy access. The project's integrated approach—combining anticipatory disaster risk governance, inclusive economic empowerment, and decentralised energy solutions—mirrors the Strategic Plan's emphasis on integrated, inclusive, and future-smart development. Furthermore, the project contributes to the achievement of several SDGs (notably **SDG 1, 5, 11, and 13**) and advances key strategic shifts outlined in the Strategic Plan, including leaving no one behind, building resilience, and leveraging digital innovation for public goods delivery. This strategic fit is reflected in both the design of the Theory of Change and the project's outcome architecture
3. Is the project linked to the programme outputs? (i.e., UNDAF Results Group Workplan/CPD, RPD or Strategic Plan IRRF for global projects/strategic interventions not part of a programme)	3 **Evidence** Project Document (pp. 1, 7): The project contributes to the Country Programme Document (CPD) Outcome 3, focusing on strengthening institutional capacities for disaster risk reduction (DRR) and climate resilience through integrated

	economic empowerment and sustainable agricultural practices.
RELEVANT	
4. Does the project target groups left furthest behind? • **3:** The target groups are clearly specified, prioritising discriminated and marginalized groups left furthest behind, identified through a rigorous process based on evidence. • **2:** The target groups are clearly specified, prioritizing groups left furthest behind. • **1:** The target groups are not clearly specified. *Note: Management Action must be taken for a score of 1. *Projects that build institutional capacity should still identify targeted groups to justify support*	3 / 2 / 1 **Evidence:** The project prioritises marginalised groups identified through a structured needs assessment, including women-headed households, persons with disabilities, smallholder farmers, linguistic minorities, and remote communities in disaster-prone areas such as Gilgit-Baltistan, Balochistan, Sindh, and KP (ProDoc pp. 3–5, 10–11). These groups face compounded risks due to limited access to risk information, financial exclusion, and socio-cultural barriers. Interventions are explicitly tailored to address these inequities—for example, early warning messages are developed in local languages and accessible formats, while women receive targeted livelihood support, access to micro-credit, and digital training. Off-grid renewable energy and community hubs are prioritised in underserved areas to close critical infrastructure gaps. The Results Framework includes disaggregated indicators to monitor equitable reach and benefit. Overall, the project's targeting approach is fully aligned with UNDP's "Leave No One Behind" principle under the Strategic Plan 2022–2025 and national inclusion commitments.
	3 / 2 / 1

5. Have knowledge, good practices, and past lessons learned of UNDP and others informed the project design? • **3:** Knowledge and lessons learned backed by credible evidence from sources such as evaluation, corporate policies/strategies, and/or monitoring have been explicitly used, with appropriate referencing, to justify the approach used by the project. • **2:** The project design mentions knowledge and lessons learned backed by evidence/sources, but have not been used to justify the approach selected. • **1:** There is little or no mention of knowledge and lessons learned informing the project design. Any references made are anecdotal and not backed by evidence. *Note: Management Action or strong management justification must be given for a score of 1	**Evidence** The project design is strongly informed by lessons from previous UNDP initiatives in Pakistan and globally, particularly from post-2022 flood recovery efforts, the GLOF-II project, and regional resilience programming (ProDoc pp. 21–23, 63). These experiences highlighted the effectiveness of anticipatory early warning systems, inclusive economic recovery, and decentralised renewable energy for disaster-prone communities. The strategy incorporates evidence-based good practices such as IoT-enabled hazard monitoring, community-driven climate-smart agriculture, and the integration of gender and disability inclusion across all outcomes. Evaluations and after-action reviews from earlier programmes informed the shift towards localised, digital, and multi-sectoral resilience interventions.
6. Does UNDP have a clear advantage to engage in the role envisioned by the project vis-à-vis national/regional/global partners and other actors? • **3:** An analysis has been conducted on the role of other partners in the area where the project intends to work, and credible evidence supports the proposed engagement of UNDP and partners through the project, including identification of potential funding partners. It is clear how results achieved by partners will complement the project's intended results and a communication strategy is in place to communicate results and raise visibility vis-à-vis key partners. Options for south-south and triangular cooperation have been considered, as appropriate. *(all must be true)* • **2:** Some analysis has been conducted on the role of other partners in the area where the project intends to work, and relatively limited evidence supports the proposed engagement of and division of labour between UNDP and partners through the project, with unclear funding and communications strategies or plans. • **1:** No clear analysis has been conducted on the role of other partners in the area that the project intends to work. There is risk that the project overlaps and/or does not coordinate with partners' interventions in this area. Options for south-south and triangular cooperation have not been considered, despite its potential relevance. *Note: Management Action or strong management justification must be given for a score of 1	3 | 2 | 1 **Evidence** The project clearly articulates UNDP's comparative advantage in convening multi-sectoral partnerships, providing technical expertise, and facilitating integrated resilience solutions (ProDoc pp. 20, 50). It builds on UNDP's longstanding engagement with national disaster management institutions, including NDMA and PMD, and its trusted role in coordinating with provincial authorities, civil society, and development partners. A detailed stakeholder mapping identifies the respective roles of key actors and ensures alignment and complementarity, minimising duplication. The project capitalises on UNDP's presence across Pakistan to foster local

	ownership and deploy context-sensitive approaches. The design includes a targeted **partnership and communications strategy** to raise visibility, engage private sector actors in off-grid energy delivery, and advocate for inclusive resilience planning. It also incorporates opportunities for **South-South and Triangular Cooperation (SSC/TrC)**—notably through the China-funded Outcome 1—to draw on international innovations in anticipatory early warning and gender-responsive adaptation. These strategic partnerships and operational strengths position UNDP to effectively coordinate implementation, leverage additional financing, and scale successful models nationally.
PRINCIPLED	
7. Does the project apply a human rights-based approach? • **3:** The project is guided by human rights and incorporates the principles of accountability, meaningful participation, and non-discrimination in the project's strategy. The project upholds the relevant international and national laws and standards. Any potential adverse impacts on enjoyment of human rights were rigorously identified and assessed as relevant, with appropriate mitigation and management measures incorporated into project design and budget. *(all must be true)* • **2:** The project is guided by human rights by prioritizing accountability, meaningful participation and non-discrimination. Potential adverse impacts on enjoyment of human rights were identified and assessed as relevant, and appropriate mitigation and management measures incorporated into the project design and budget. *(both must be true)* • **1:** No evidence that the project is guided by human rights. Limited or no evidence that potential adverse impacts on enjoyment of human rights were considered. *Note: Management action or strong management justification must be given for a score of 1	3 / 2 1 **Evidence** The project is designed with an explicit commitment to human rights, ensuring **accountability, non-discrimination, and meaningful participation** across all components (SESP pp. 55, 62–63; ProDoc pp. 3–5). It recognises the rights of disaster-affected communities to live in a **safe, clean, and sustainable environment**, and ensures that these rights are upheld regardless of geography, ethnicity, gender, or ability. The project acknowledges that all individuals—whether living in upstream glacier zones of **Gilgit-**

	Baltistan, prone to GLOFs and landslides, or in downstream lowlands affected by flooding and drought—have an **equal right to protection, risk information, and sustainable recovery opportunities**. It targets high-risk glaciers and surrounding communities without discrimination, aiming to safeguard the rights of both **high-altitude and lowland populations** through equitable, inclusive early warning and resilience-building measures. Human rights principles are embedded in the project design through: – Participatory processes for identifying risks and setting priorities – Tailored communication tools that are accessible across literacy levels and physical abilities – Community-centred planning that ensures inclusion of women, persons with disabilities, and marginalised groups in both upstream and downstream areas – Mitigation plans addressing potential risks to social and environmental rights, including displacement and exclusion These principles are further operationalised through the SESP, which identifies risks to rights enjoyment and integrates safeguards into the project's management, budget, and monitoring frameworks. The project directly supports Pakistan's national commitments to the SDGs and constitutional guarantees of equitable development and environmental justice.
8. Does the project use gender analysis in the project design? • **3:** A participatory gender analysis has been conducted and results from this gender analysis inform the development challenge, strategy and expected results sections of the project document. Outputs and indicators of the results	**3** | **2** | **1** **Evidence** A comprehensive gender analysis informs the project's development

framework include explicit references to gender equality, and specific indicators measure and monitor results to ensure women are fully benefitting from the project. *(all must be true)* • **2:** A basic gender analysis has been carried out and results from this analysis are scattered (i.e., fragmented and not consistent) across the development challenge and strategy sections of the project document. The results framework may include some gender sensitive outputs and/or activities, but gender inequalities are not consistently integrated across each output. *(all must be true)* • **1:** The project design may or may not mention information and/or data on the differential impact of the project's development situation on gender relations, women and men, but the gender inequalities have not been clearly identified and reflected in the project document. *Note: Management Action or strong management justification must be given for a score of 1	challenge, strategy, and results framework, with particular depth in Outcome 2 (ProDoc pp. 5, 10–11, 22). The analysis identifies how climate-induced disasters disproportionately affect women—particularly those heading households, engaged in informal work, or living in remote, disaster-prone regions. It outlines the systemic barriers women face in accessing early warning systems, financial services, productive assets, and decision-making platforms. These findings directly inform the project's gender-responsive design: – **Early warning systems** are tailored to reach women through culturally and linguistically adapted channels. – **Economic empowerment interventions** provide in-kind livelihood restoration, access to micro-credit, digital and climate-smart skills training, and market linkages. – **Policy engagement** and advocacy activities promote gender-inclusive reforms in resilience and recovery frameworks. The project assigns **GEN2 and GEN3 gender markers** to its outputs, signalling significant and principal contributions to gender equality. The Results Framework includes **explicit gender equality indicators**, with sex-disaggregated baselines and targets to measure women's access to services, economic benefits, and participation in resilience-building efforts. Overall, gender considerations are not only mainstreamed but embedded throughout the project, contributing to structural shifts in how women are positioned as agents of resilience and recovery.
9. Did the project support the resilience and sustainability of societies and/or ecosystems? • **3:** Credible evidence that the project addresses sustainability and resilience dimensions of development challenges, which are integrated in the project strategy and	**3** | 2 1 **Evidence** The project is designed as a climate resilience and systems

design. The project reflects the interconnections between the social, economic and environmental dimensions of sustainable development. Relevant shocks, hazards and adverse social and environmental impacts have been identified and rigorously assessed with appropriate management and mitigation measures incorporated into project design and budget. *(all must be true)*. • **2:** The project design integrates sustainability and resilience dimensions of development challenges. Relevant shocks, hazards and adverse social and environmental impacts have been identified and assessed, and relevant management and mitigation measures incorporated into project design and budget. *(both must be true)* • **1:** Sustainability and resilience dimensions and impacts were not adequately considered. *Note: Management action or strong management justification must be given for a score of 1	transformation initiative, integrating environmental, social, and economic sustainability across all outcomes. Each component contributes to long-term resilience through inclusive systems change, institutional capacity-building, and environmentally adaptive solutions (ProDoc pp. 3–5, 12; SESP Part A). – **Social sustainability** is embedded through local ownership, inclusive governance structures, and participatory processes. Vulnerable groups—including women, persons with disabilities, and remote communities—are meaningfully engaged in design and decision-making. Stakeholder engagement platforms and community hubs promote long-term inclusion and capacity. – **Economic sustainability** is promoted through green livelihoods for women, skills development, and climate-smart enterprise models tailored to local risks. The project supports financial inclusion and the revitalisation of markets in disaster-prone areas, reinforcing post-crisis recovery and long-term economic agency (SESP: Outcome 2). – **Environmental sustainability** is central to the project, with Outcome 3 supporting decentralised renewable energy (e.g. solar microgrids, agro-voltaics), water-efficient agriculture, and sustainable land use. These technologies are selected based on ecological suitability, low carbon footprint, and community uptake (SESP: Outcome 3, Standards 1 & 2). The SESP confirms that the project contributes to sustainable development and environmental justice by reducing disaster risk, emissions, and biodiversity loss, while enhancing community resilience to shocks. It also outlines mitigation strategies for risks related to land use, pollution, and resource management, with

	Environmental and Social Management Plans (ESMPs) planned for post-PAC rollout.
10. Has the Social and Environmental Screening Procedure (SESP) been conducted to identify potential social and environmental impacts and risks? The SESP is not required for projects in which UNDP is Administrative Agent only and/or projects comprised solely of reports, coordination of events, trainings, workshops, meetings, conferences and/or communication materials and information dissemination. [if yes, upload the completed checklist. If SESP is not required, provide the reason for the exemption in the evidence section.]	Yes (3) / No **Evidence** The project has undergone a **comprehensive Social and Environmental Screening Procedure (SESP)** as required by UNDP's Social and Environmental Standards. The SESP was conducted during the design and appraisal stage and has been annexed to the Project Document. Based on the assessment, the project is categorised as **Moderate Risk** and will undergo additional targeted assessments and environmental and social management planning during inception (SESP Attachment 1). An **Environmental and Social Management Plan (ESMP)** is planned for development in Q2 2025. The SESP process has ensured that social and environmental sustainability is embedded throughout project design, aligned with UNDP's risk management procedures and programming principles.
MANAGEMENT & MONITORING	
11. **Does the project have a strong results framework?** • **3:** The project's selection of outputs and activities are at an appropriate level. Outputs are accompanied by SMART, results-oriented indicators that measure the key expected development changes, each with credible data sources and populated baselines and targets, including gender sensitive, target group focused, sex-disaggregated indicators where appropriate. *(all must be true)* • **2:** The project's selection of outputs and activities are at an appropriate level. Outputs are accompanied by SMART, results-oriented indicators, but baselines, targets and data sources may not yet be fully specified. Some use of target group focused, sex-disaggregated indicators, as appropriate. *(all must be true)* • **1:** The project's selection of outputs and activities are not at an appropriate level; outputs are not accompanied by SMART, results-oriented indicators that measure the expected change and have not been populated with baselines and targets; data sources are not specified,	3 / 2 / 1 **Evidence** The project features a well-developed Results and Resources Framework (RRF) that aligns outputs and activities with the project's Theory of Change and UNDP Strategic Plan outcomes (ProDoc pp. 30-33). The RRF includes **clearly defined outputs** for each of the three outcomes, with associated activities that are appropriately scoped, time-bound, and results-oriented. Each output is supported by **SMART indicators**—specific,

and/or no gender sensitive, sex-disaggregation of indicators. *(if any is true)* *Note: Management Action or strong management justification must be given for a score of 1 The project contains well-defined outcomes and outputs, each supported by SMART indicators with credible data sources, baselines, and targets. The inclusion of gender-sensitive, sex-disaggregated indicators further strengthens the results framework.	measurable, achievable, relevant, and time-bound—which reflect the expected development changes. Indicators are accompanied by **baseline values, targets**, and **credible data sources**, allowing for systematic monitoring and performance tracking. Importantly, the framework demonstrates a strong commitment to **gender sensitivity and inclusion**. Indicators are **sex-disaggregated** where relevant and include metrics that assess **women's access to early warning systems, economic opportunities, and renewable energy solutions**. Several indicators also reflect target group focus—such as those related to persons with disabilities, smallholder farmers, and marginalised communities. Additionally, the RRF clearly identifies **means of verification** and assumptions for each indicator, contributing to transparent and adaptive results management. The structure and quality of the results framework meet UNDP standards and position the project well for effective delivery, oversight, and accountability.
12. Is the project's governance mechanism clearly defined in the project document, including composition of the project board? • **3:** The project's governance mechanism is fully defined. Individuals have been specified for each position in the governance mechanism (especially all members of the project board.) Project Board members have agreed on their roles and responsibilities as specified in the terms of reference. The ToR of the project board has been attached to the project document. *(all must be true)*. • **2:** The project's governance mechanism is defined; specific institutions are noted as holding key governance roles, but individuals may not have been specified yet. The project document lists the most important responsibilities of the project board, project director/manager and quality assurance roles. *(all must be true)* • **1:** The project's governance mechanism is loosely defined in the project document, only mentioning key roles that will	3 | 2 1 **Evidence** The project will be implemented through the **Direct Implementation Modality (DIM)**, in line with UNDP's Programme and Operations Policies and Procedures (POPP). A **Project Board** will be established to provide oversight and strategic guidance throughout implementation, including endorsement of annual work plans, progress reviews, and major decision-making on risk,

need to be filled at a later date. No information on the responsibilities of key positions in the governance mechanism is provided. *Note: Management Action or strong management justification must be given for a score of 1	results, and resource management. The Project Document clearly outlines the governance mechanism and decision-making structure. It specifies institutional representation on the Project Board, which will include UNDP, government stakeholders (e.g. NDMA, PMD), relevant provincial counterparts, and civil society representatives. However, the **specific names of board members and their formal acceptance of roles and responsibilities** will be confirmed at the **project inception phase**. While the **Terms of Reference (ToR)** for the Project Board are not yet annexed, the ProDoc defines the expected responsibilities of the board and core project roles, including that of the **Project Manager/Director**, quality assurance functions, and the Implementing Partner's accountability. Decision-making will be consensus-based and guided by principles of fairness, transparency, value for money, and inclusive representation. The governance structure has been designed to ensure responsiveness to community needs and adaptive course correction, in line with UNDP's operational and ethical standards. (ProDoc p.43)
13. Have the project risks been identified with clear plans stated to manage and mitigate each risk? • **3:** Project risks related to the achievement of results are fully described in the project risk log, based on comprehensive analysis drawing on the programme's theory of change, Social and Environmental Standards and screening, situation analysis, capacity assessments and other analysis such as funding potential and reputational risk. Risks have been identified through a consultative process with key internal and external stakeholders. Clear and complete plan in place to manage and mitigate each risk, reflected in project budgeting and monitoring plans. *(both must be true)*	3 | 2 1 **Evidence** The project includes a comprehensive and well-structured Risk Log (ProDoc Annex, pp. 64–67), which identifies key risks across financial, operational, institutional, environmental, and social dimensions. The risks are clearly linked to the Theory of Change and were identified through a

• **2:** Project risks related to the achievement of results are identified in the initial project risk log based on a minimum level of analysis and consultation, with mitigation measures identified for each risk. • **1:** Some risks may be identified in the initial project risk log, but no evidence of consultation or analysis and no clear risk mitigation measures identified. This option is also selected if risks are not clearly identified and/or no initial risk log is included with the project document. *Note: Management Action must be taken for a score of 1 The risk log outlines key project risks, including financial, operational, and regulatory risks, with corresponding mitigation strategies. However, ongoing monitoring and adaptive risk management measures need further refinement.	consultative and evidence-based process, drawing from the Social and Environmental Screening Procedure (SESP), situation analysis, partner consultations, and UNDP's prior operational experience in Pakistan. Risk mitigation measures are clearly integrated into the project's **implementation plan and budget**, including provisions for grievance redress, adaptive M&E, and environmental and social management plans (ESMPs). However, while the identification and mitigation strategies are robust, the **systems for ongoing monitoring and adaptive risk management require further refinement**—particularly to operationalise real-time learning and corrective action during implementation. This will be addressed during the inception phase through refinement of the risk management framework and clarification of institutional responsibilities for tracking and escalation. Risk Register - Annex 03
EFFICIENT	
14. Have specific measures for ensuring cost-efficient use of resources been explicitly mentioned as part of the project design? This can include, for example: i) using the theory of change analysis to explore different options of achieving the maximum results with the resources available; ii) using a portfolio management approach to improve cost effectiveness through synergies with other interventions; iii) through joint operations (e.g., monitoring or procurement) with other partners; iv) sharing resources or coordinating delivery with other projects, v) using innovative approaches and technologies to reduce the cost of service delivery or other types of interventions. *(Note: Evidence of at least one measure must be provided to answer yes for this question)* The project employs a co-financing model and leverages existing UNDP initiatives and infrastructure to maximize cost efficiencies. Strategic partnerships with government agencies and NGOs further enhance cost-effectiveness.	3 | 2 1 The project integrates several specific measures to ensure **cost-efficient use of resources**, informed by its Theory of Change and operational context (ProDoc pp. 13, 31–35). It employs a **co-financing model** that pools resources from bilateral, multilateral, and national sources, thereby reducing the financial burden on any single contributor and enhancing sustainability. Key cost-efficiency strategies include:

	– **Leveraging existing UNDP platforms**: The project builds on UNDP's prior investments in disaster resilience, energy access, and women's empowerment in Pakistan, avoiding duplication and reducing startup and transaction costs. Existing field presence, operational structures, and partner networks are used to minimise overhead. – **Strategic partnerships and joint implementation**: The project collaborates with NDMA, PMD, provincial DRMCs, and civil society organisations to deliver activities jointly. This reduces parallel processes and enables shared use of infrastructure and technical expertise (e.g. joint use of data platforms, coordinated training). – **Innovative technologies for delivery**: Digital early warning systems, mobile-based risk communication, and remote training models reduce recurring costs associated with analogue systems. Use of renewable energy for powering early warning and livelihood systems (e.g. solar microgrids, agri-voltaics) ensures long-term savings on energy and operations. – **Portfolio-level synergy**: Activities are designed to complement ongoing UNDP programmes in the areas of nature-based solutions, digital transformation, and climate adaptation, generating economies of scale and enabling cross-project learning. These measures reflect a deliberate and multi-layered approach to achieving **maximum results within available resources**, aligned with UNDP's value-for-money principles and cost-conscious programming standards.
15. Is the budget justified and supported with valid estimates?	3 / 2 / 1

• **3:** The project's budget is at the activity level with funding sources, and is specified for the duration of the project period in a multi-year budget. Realistic resource mobilisation plans are in place to fill unfunded components. Costs are supported with valid estimates using benchmarks from similar projects or activities. Cost implications from inflation and foreign exchange exposure have been estimated and incorporated in the budget. Adequate costs for monitoring, evaluation, communications and security have been incorporated. • **2:** The project's budget is at the activity level with funding sources, when possible, and is specified for the duration of the project in a multi-year budget, but no funding plan is in place. Costs are supported with valid estimates based on prevailing rates. • **1:** The project's budget is not specified at the activity level, and/or may not be captured in a multi-year budget.	**Evidence** The project includes a **multi-year, activity-level budget** that clearly outlines projected costs by output and indicates funding sources where confirmed (ProDoc pp. 37–42). The budget spans the full project duration and provides a granular breakdown of expenditures across key components, including personnel, implementation, knowledge management, communications, and monitoring. **Cost estimates are supported by valid benchmarks**, drawn from comparable UNDP projects in Pakistan and regional experience in disaster resilience, women's livelihoods, and renewable energy. The budget accounts for both direct implementation and support costs, including provisions for **development effectiveness, procurement, HR, security, and administrative overheads** in accordance with UNDP's cost recovery policy. Adequate allocations are made for **monitoring and evaluation (M&E)**, including third-party verification, as well as for risk mitigation measures such as **safeguard monitoring and grievance redress mechanisms**. Communications and stakeholder engagement have dedicated budget lines to support transparency and accountability. While some components remain partially unfunded, the project includes a realistic resource mobilisation approach, including plans to engage climate finance mechanisms and bilateral donors to scale implementation.4

16. Is the Country Office/Regional Hub/Global Project fully recovering the costs involved with project implementation? • **3:** The budget fully covers all project costs that are attributable to the project, including programme management and development effectiveness services related to strategic country programme planning, quality assurance, pipeline development, policy advocacy services, finance, procurement, human resources, administration, issuance of contracts, security, travel, assets, general services, information and communications based on full costing in accordance with prevailing UNDP policies (i.e., UPL, LPL.) • **2:** The budget covers significant project costs that are attributable to the project based on prevailing UNDP policies (i.e., UPL, LPL) as relevant. • **1:** The budget does not adequately cover project costs that are attributable to the project, and UNDP is cross-subsidizing the project. *Note: Management Action must be given for a score of 1	3 / 2 / 1	**Evidence** The budget covers significant project costs but may require additional resource mobilization for full cost recovery (ProDoc, p. 37-42)
EFFECTIVE		
17. Have targeted groups been engaged in the design of the project? • 3: Credible evidence that all targeted groups, prioritising discriminated and marginalized populations that will be involved in or affected by the project, have been actively engaged in the design of the project. The project has an explicit strategy to identify, engage and ensure the meaningful participation of target groups as stakeholders throughout the project, including through monitoring and decision-making (e.g., representation on the project board, inclusion in samples for evaluations, etc.) • 2: Some evidence that key targeted groups have been consulted in the design of the project. • 1: No evidence of engagement with targeted groups during project design.	3 / 2 / 1	**Evidence** The project design was informed by a series of **consultations with key stakeholders**, including relevant government departments (NDMA, PMD, provincial DRMCs), UN agencies, civil society organisations, and technical experts (ProDoc pp. 21-22). These consultations helped shape priorities around anticipatory disaster risk reduction, inclusive green recovery, and decentralised energy access. While there is evidence that community-based organisations and implementing partners with close ties to marginalised groups were involved in the conceptualisation phase, **direct engagement with target communities—particularly women, persons with disabilities, and rural households in high-risk zones—was limited at the design stage**. The project does, however, include strong provisions to ensure the **meaningful participation of targeted groups throughout implementation**,

	including: – Community-led design of early warning systems – Stakeholder representation in DRM Committees and cooperative structures – Participatory planning at community risk hubs and inclusion in M&E processes – Tailored grievance redress mechanisms accessible to vulnerable populations Moreover, a **Stakeholder Engagement Plan** and **community profiling exercises** are planned for the inception phase to enhance inclusion, ensure responsiveness to local needs, and secure representation of marginalised voices in project oversight and feedback mechanisms. As such, while partial engagement has taken place, further outreach to targeted groups is recommended to strengthen ownership and maximise impact.	
18. Does the project plan for adaptation and course correction if regular monitoring activities, evaluation, and lesson learned demonstrate there are better approaches to achieve the intended results and/or circumstances change during implementation? A robust M&E framework ensures continuous learning and adaptability, with quarterly and annual reviews feeding into strategic adjustments.	Yes (3)	No
19. The gender marker for all project outputs are scored at GEN2 or GEN3, indicating that gender has been fully mainstreamed into all project outputs at a minimum. *Note: Management Action or strong management justification must be given for a score of "no" Gender-responsive interventions are embedded across all project components, particularly in women's economic empowerment and early warning systems.	Yes (GEN2 & GEN3 for outputs) **Evidence** Gender equality considerations are fully mainstreamed across all project components, and all outputs have been assigned a **GEN2 or GEN3 gender marker**, consistent with UNDP's Gender Equality Strategy (2022–2025) (ProDoc pp. 5, 10–11, 22; SESP Part A). – **Outcome 1** integrates gender-responsive early warning systems by ensuring women's access to timely, actionable climate risk information through context-appropriate communication tools and inclusive disaster preparedness mechanisms.	

	– **Outcome 2** is centred on **women's economic empowerment**, supporting the restoration and scaling of women-led green enterprises, digital upskilling, financial inclusion, and formation of women's cooperatives. – **Outcome 3** promotes women's access to decentralised renewable energy, productive technologies, and climate-smart agricultural tools, enhancing both household resilience and agency in decision-making. The **Results Framework** includes **sex-disaggregated indicators** and targets that specifically measure women's access, participation, and benefit. A **Gender Action Plan and GBV risk mitigation strategy** will guide implementation, supported by gender-sensitivity training for project staff and implementing partners. This mainstreaming approach ensures that gender equality is not treated as a standalone theme but as a transformative element within the project's overall resilience-building strategy.
SUSTAINABILITY & NATIONAL OWNERSHIP	
20. Have national/regional/global partners led, or proactively engaged in, the design of the project? • **3:** National partners (or regional/global partners for regional and global projects) have full ownership of the project and led the process of the development of the project jointly with UNDP. • **2:** The project has been developed by UNDP in close consultation with national/regional/global partners. • **1:** The project has been developed by UNDP with limited or no engagement with national partners.	3 | 2 | 1 **Evidence** The project was developed by UNDP in **close consultation with national counterparts**, including the **National Disaster Management Authority (NDMA), Pakistan Meteorological Department (PMD), Ministry of Climate Change**, and relevant provincial authorities (ProDoc pp. 6–7, 21–22). These stakeholders provided critical input during the conceptualisation of all three outcome areas—early warning systems, economic recovery, and decentralised energy. Local agencies contributed to the identification of priority vulnerabilities, existing institutional gaps, and delivery

	mechanisms that shaped the project's design. Government participation was instrumental in aligning the project with national frameworks such as the **National Climate Change Policy**, the **DRR Policy**, and Pakistan's **Vision 2025**. However, further efforts are needed to formalize commitments for post-project sustainability.
21. Are key institutions and systems identified, and is there a strategy for strengthening specific/ comprehensive capacities based on capacity assessments conducted? • **3:** The project has a strategy for strengthening specific capacities of national institutions and/or actors based on a completed capacity assessment. This strategy includes an approach to regularly monitor national capacities using clear indicators and rigorous methods of data collection, and adjust the strategy to strengthen national capacities accordingly. • **2:** A capacity assessment has been completed. There are plans to develop a strategy to strengthen specific capacities of national institutions and/or actors based on the results of the capacity assessment. • **1:** Capacity assessments have not been carried out. Capacity-building is an integral part of the project, with training programs for government and community stakeholders. A formal capacity assessment could strengthen this further.	3 | 2 | 1 **Evidence** The project identifies key national and subnational institutions—such as NDMA, PMD, provincial DRMCs, Women Development Departments, energy service providers, and agricultural extension services—as central actors in implementation and sustainability (ProDoc pp. 21–24). Capacity-building for these institutions is a core part of the project's approach, with tailored training, technical assistance, and operational support included across all outcomes. However, while capacity-building activities are well-integrated into the project design, a formal, standalone capacity assessment has not yet been conducted. The project plans to conduct such assessments during inception to better define baseline institutional capacities, performance gaps, and tailored development pathways. The results of these forthcoming assessments will be used to refine the project's capacity development strategy, supported by indicators to monitor progress and adapt support as needed. Until then, the capacity development logic is inferred from

	stakeholder consultations, UNDP's institutional experience in Pakistan, and alignment with national resilience strategies.	
22. Is there a clear strategy embedded in the project specifying how the project will use national systems (i.e., procurement, monitoring, evaluations, etc.,) to the extent possible? The project is implemented through DIM Modality, as described in the UNDP Programme and Operations Policies and Procedures (POPP). but will be implemented through close involvement of national stakeholders.	Yes (3)	
23. Is there a clear transition arrangement/ phase-out plan developed with key stakeholders in order to sustain or scale up results (including resource mobilisation and communications strategy)? The project embeds sustainability through public-private partnerships, local capacity-building, and alignment with national policies. A phased transition plan ensures long-term viability.	3	2
	Evidence The project includes a clear and multi-layered transition strategy to sustain and scale results beyond the project lifecycle. Sustainability is embedded in the design through a combination of **institutional integration, capacity-building, public-private partnerships, and alignment with national policy frameworks** (ProDoc pp. 3–5, 12, 24, 31–35). Key features of the transition strategy include: – **Phased implementation** of activities with built-in handover milestones and gradual transfer of responsibilities to national and provincial partners – Engagement of **local governments, CSOs, and community structures** (e.g. DRMCs, cooperatives, women's hubs) to ensure continuity of services and ownership – Use of **decentralised renewable energy** and community-led infrastructure to reduce future dependency on external funding – Development of scalable	

	models in early warning systems, livelihood recovery, and green energy that can be replicated through government programmes or additional funding – A **communications and knowledge dissemination strategy** to generate visibility, share lessons learned, and build momentum for policy integration While some transition arrangements will be formalised during inception (e.g. MOUs, integration into sectoral plans), the project takes a long-term, systems-focused approach to resilience. This includes **resource mobilisation planning** to attract additional investment, ensuring continuity and scale-up of proven interventions.

[1] The three development settings in UNDP's 2018-2021 Strategic Plan are: a) Eradicate poverty in all its forms and dimensions; b) Accelerate structural transformations for sustainable development; and c) Build resilience to shocks and crises

[2] The six Signature Solutions of UNDP's 2018-2021 Strategic Plan are: a) Keeping people out of poverty; b) Strengthen effective, inclusive and accountable governance; c) Enhance national prevention and recovery capacities for resilient societies; d) Promote nature based solutions for a sustainable planet; e) Close the energy gap; and f) Strengthen gender equality and the empowerment of women and girls.

1. Social and Environmental Screening Template

Project Information

Project Information	
1. Project Title	Enhancing Climate Resilience and Economic Recovery through Early Warning Systems, Women's Empowerment, and Sustainable Energy Solutions in Pakistan
2. Project Number (i.e. project ID, PIMS+)	01004421
3. Location (Global/Region/Country)	Country - Pakistan
4. Project stage (Design or Implementation)	Design & Appraisal
5. Date	1st March 2025

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?

Briefly describe in the space below how the project mainstreams the human rights-based approach

The project adopts a robust human rights-based approach by placing the rights, voices, and resilience of vulnerable communities—particularly women, persons with disabilities, linguistic minorities, and those facing extreme climate risk—at the centre of its design and delivery. In Pakistan, structural inequities and geographic exposure leave millions at heightened risk of climate shocks, economic instability, and exclusion from essential services. By investing in anticipatory early warning systems, inclusive green livelihoods, and decentralised clean energy, the project aims to operationalise the principle of **Leaving No One Behind**.

Outcome 1 enhances the state's duty to protect life and safety through proactive, **IoT-enabled, community-driven early warning systems**. These systems are designed to be **culturally responsive**, linguistically accessible, and supported by inclusive preparedness mechanisms—thus helping ensure every individual, regardless of literacy, gender, or ability, can access lifesaving information. The project strengthens the capacity of national and local duty-bearers, such as NDMA, PMD, and DRMCs, to uphold people's rights to safety, information, and risk mitigation. Rights-holders—especially those most marginalised—are supported through accessible community hubs, preparedness training, and risk education initiatives that empower them to act on early warnings and claim their rights to protection and participation. Outcome 2 advances the right to work, financial inclusion, and equal economic opportunity by restoring and strengthening women-led livelihoods in climate-affected regions. In doing so, it addresses systemic barriers to income, ownership, and participation that disproportionately impact women, particularly in post-disaster contexts. By supporting women's cooperatives, climate-resilient enterprises, and access to finance and skills, the project enables women to claim their economic rights and participate meaningfully in local governance and green recovery efforts.

Outcome 3 supports the right to clean energy, a healthy environment, and sustainable livelihoods by expanding access to decentralised renewable energy and climate-smart agriculture. These interventions reduce energy poverty and environmental degradation while building the adaptive capacity of communities to withstand climate shocks. By enabling equitable access to productive, low-emission technologies, the project ensures that marginalised populations can live and work in dignity while exercising their right to development.

Through its emphasis on community participation, inclusive policy dialogues, and grievance redress systems, the project reinforces downward accountability and transparency. The use of **real-time, publicly accessible dashboards** and community scorecards also ensures that state obligations and development outcomes remain visible and trackable to citizens.

By directly linking climate resilience, clean energy access, and economic recovery to the enjoyment of fundamental rights—including the right to life, health, housing, work, and information—the project strengthens social equity and justice while enabling system-wide transformation for Pakistan's most climate-vulnerable populations.

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment

The project places women's empowerment at the centre of its climate resilience strategy, recognising that climate change exacerbates existing gender inequalities. In Pakistan, structural barriers—including gender norms, care burdens, and limited mobility—undermine women's access to information, economic opportunities, and decision-making spaces. These challenges are amplified in times of crisis, as seen during the 2022 floods.

To address these disparities, the project will conduct a **comprehensive gender analysis** during inception and develop a **Gender Action Plan** to guide the integration of gender equality across all outcomes and outputs. Outcome 2 specifically restores and strengthens women-led livelihoods through financial inclusion, asset restoration, and access to green skills and markets. Women's cooperatives and digital mentorship platforms will support their long-term economic agency.

Across all components, the project embeds **gender-responsive risk communication**, ensures women's participation in disaster governance, and incorporates **safeguards to mitigate gender-based violence (GBV)** risks. A **GBV Action Plan** and regular gender-sensitivity training for partners and staff will ensure conflict-sensitive and inclusive implementation. By promoting women as active agents of resilience—rather than passive recipients—the project advances their rights to work, safety, participation, and climate-informed development, in line with **SDG 5**, Pakistan's Gender Policy Frameworks, and UNDP's Gender Equality Strategy.

Briefly describe in the space below how the project mainstreams sustainability and resilience

This project is fundamentally a **climate resilience and systems transformation initiative**, designed to enhance sustainability at individual, community, institutional, and ecological levels. Its three core outcomes work synergistically to address Pakistan's systemic exposure to climate-related shocks, energy poverty, and socioeconomic exclusion.

Outcome 1 enhances anticipatory systems by deploying **IoT-based multi-hazard monitoring**, real-time data dashboards, and **community-based early warning mechanisms**. These are powered by **solar microgrids**, ensuring energy continuity during disasters. Outcome 2 builds adaptive capacity through **women's green livelihoods**, tailored to regional climate risks (e.g. flood-resistant crop training, solar appliance use, digital market access). Outcome 3 ensures environmental and energy sustainability by promoting **climate-smart agriculture, decentralised renewable energy systems (DRE), agro-voltaics, and water conservation techniques**. All technologies are selected based on suitability to local environmental conditions, scalability, and minimal ecological footprint.

The project is aligned with **Pakistan's Climate Change Policy, Vision 2025, the Paris Agreement, and the Sendai Framework**, with activities directly contributing to SDGs 1, 5, 7, 8, 11, and 13. Environmental safeguards are built in through a forthcoming **Environmental and Social Management Plan (ESMP)**, with implementation supported by technical experts and local government.

Finally, sustainability is reinforced through a **phased financing model** that enables long-term scaling of green infrastructure, clean energy, and inclusive livelihoods based on resource availability and performance.

Briefly describe in the space below how the project strengthens accountability to stakeholders

The project prioritises robust accountability mechanisms to ensure transparency, responsiveness, and meaningful participation across all stages of implementation. Grounded in UNDP's accountability framework and SES standards, the project integrates three interlinked pillars of accountability: (1) inclusive information sharing, (2) accessible feedback mechanisms, and (3) timely and appropriate response and action.

Information Sharing and Participation
The project will proactively disseminate information about planned activities, intended outcomes, rights and entitlements, and grievance redress processes through locally appropriate formats and platforms. These include public briefings, community information boards, printed materials, local FM radio, and visual aids. Stakeholder engagement will be institutionalised through community risk hubs, women's cooperatives, local disaster risk management committees, and provincial and national policy forums—ensuring marginalised groups, particularly women, persons with disabilities, and ethnic minorities, are not only consulted but directly shape decision-making processes.

Feedback and Grievance Redress
A tailored, multilingual **Grievance Redress Mechanism (GRM)** will be established, enabling stakeholders to report concerns related to the project, including issues of exclusion, safety, or misconduct. The mechanism will include multiple, accessible channels—such as hotlines, email, SMS, suggestion boxes, and in-person focal points at community hubs and civil works sites. All complaints will be managed confidentially and with respect for protection against retaliation, in line with UNDP's zero-tolerance policy.
At physical infrastructure sites (under Outcome 3), grievance contact details will be visibly displayed on signage in local languages, with a designated focal person assigned to process and escalate issues as needed. Sensitive concerns, such as allegations of GBV or abuse of authority, will be referred to the appropriate safeguarding or protection bodies.

Response, Learning, and Course Correction
Feedback received through the GRM and regular field visits will inform project adaptation and management decisions. A dedicated M&E team—supplemented by third-party monitors—will conduct periodic assessments, engage communities through spot checks and focus group discussions, and document lessons learned. Where appropriate, feedback will be escalated to the UNDP Country Office and addressed in consultation with partners and government counterparts.
By embedding structured feedback loops and transparent decision-making into the project architecture, the initiative ensures that affected communities can exercise their right to information, participation, and remedy throughout the project cycle.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Complete SESP Attachment 1 before responding to Question 2.*	**QUESTION 3: What is the level of significance of the potential social and environmental risks?** *Note: Respond to Questions 4 and 5below before proceeding to Question 5*			**QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High**
Risk Description (broken down by event, cause, impact)	***Impact and Likelihood (1-5)***	***Significance (Low, Moderate Substantial, High)***	***Comments (optional)***	***Description of assessment and management measures for risks rated as Moderate, Substantial or High***
RISK: 1 Event: The project may not adequately reach and support the most climate-vulnerable communities, particularly marginalized groups. Cause: Lack of accurate baseline data; limited engagement of vulnerable groups; insufficient monitoring. Impact: Inequitable access to early warning, financial services, or livelihood opportunities may exacerbate pre-existing vulnerabilities. Ref: Project Outputs 1-3 **Principle – Human Rights** **P.2.** Is there a risk that duty-bearers (e.g., government agencies) do not have the capacity to meet their obligations in the	I =3 L =2	Low		Implement a **Stakeholder Engagement Plan** to ensure community voices—especially those of marginalised groups—are integrated into all project phases.

project? **P.3**. Is there a risk that rights-holders (e.g., project-affected persons) do not have the capacity to claim their rights? **P.5.** Inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups, including persons with disabilities				
RISK: 2 Event: Women's economic empowerment activities may lead to household and community tensions, increasing gender-based violence (GBV). Cause: Resistance to changes in traditional gender roles; absence of support systems to mitigate gendered risks. Impact: Higher incidents of GBV; reduced participation of women in economic recovery programs. Ref: Project Output 2 **Principle – Gender Equality and Women's Empowerment** **P.12.** Exacerbation of risks of gender-based violence?	I =2 L =2	Low		• Develop a Gender Action Plan and GBV risk mitigation strategy. • Train project staff, partners, and community leaders in gender sensitivity and referral procedures. • Provide access to gender-sensitive grievance redress channels and link survivors to local protection services where available.
RISK: 3 Event: Unsustainable agricultural and energy practices may harm biodiversity and natural resources. Cause: Poor enforcement of sustainable land-use policies; lack of awareness among beneficiaries. Impact: Soil degradation, biodiversity loss, or water contamination, potentially reducing long-term project sustainability. Ref: Project Output 3 **Standard 1: Biodiversity Conservation and**	I=3 L=3	Moderate		• Promote climate-smart agriculture and water conservation techniques tailored to local conditions. • Technical experts will provide training on sustainable land use and agroecological methods. • Develop and implement Environmental Management Plans (EMPs) for demonstration sites and off-grid energy infrastructure. • A monitoring framework will ensure compliance with environmental standards.

Sustainable Natural Resource Management 1.9 significant agricultural production?				
RISK: 4 Event: Renewable energy and construction activities may contribute to greenhouse gas emissions and pollution. Cause: Construction emissions, improper waste disposal, lack of regulatory enforcement. Impact: Increased carbon footprint and air pollution, affecting community health. Ref: Project Outputs 1, 3 **Standard 2: Climate Change and Disaster Risks** 2.4 increases in greenhouse gas emissions, black carbon emissions or other drivers of climate change	I=3 L=2	Moderate		• Ensure all contractors adopt sustainable construction practices and waste management systems. • Prioritise energy-efficient and low-emission technologies. • Conduct third-party audits to ensure compliance with environmental standards and performance benchmarks. • Enforce waste handling and disposal protocols through standard operating procedures and environmental clauses in all contracts.
RISK: 5 Event: Community health, safety, and security may be compromised due to construction failures or hazardous materials. Cause: Use of substandard materials, lack of safety measures, inadequate oversight. Impact: Increased risks of accidents, waterborne diseases, and long-term health issues. Ref: Project Outputs 1, 3 **Standard 3: Community Health, Safety and Security** 3.1 construction and/or infrastructure development (e.g., roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams) 3.2 air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water	I=2 L=2	Low		• UNDP will engage third-party quality assurance firms to monitor contractor performance and verify compliance. • Ensure workers have access to the grievance redress mechanism (GRM) for reporting violations.

quality due to runoff, erosion, sanitation? 3.4 risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health? 3.5 transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)? 3.7 influx of project workers to project areas? 3.8 engagement of security personnel to protect facilities and property or to support project activities?				
RISK:6 Event: Poor waste management and pollution from agricultural or infrastructure activities may cause localised environmental damage. Cause: Lack of capacity among contractors; improper disposal of hazardous materials. Impact: Environmental degradation and health risks. Ref: Project Output 2 **Standard 8: Pollution Prevention and Resource Efficiency** 8.1 the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts? 8.2 the generation of waste (both hazardous and non-hazardous)? 8.4 the use of chemicals or materials subject to international bans or phase-outs? *For example, DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention*	I = 2 L =2	Low		• **Enforce strict waste disposal guidelines** in all construction and agricultural demonstration sites. • Conduct **capacity-building initiatives for contractors** and field partners on eco-friendly waste handling and disposal. • Promote the use of **non-toxic, biodegradable materials wherever possible**. • Include waste management clauses in all technical contracts and monitor compliance throughout the project lifecycle.

8.5 the application of pesticides that may have a negative effect on the environment or human health?						
	QUESTION 4: What is the overall project risk categorization?					
	Low Risk	☐				
	Moderate Risk	☐				
	Substantial Risk	☐				
	High Risk	☐				
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply)					
	Question only required for Moderate, Substantial and High-Risk projects					
	Is assessment required? (check if "yes")	☐				***Status? (completed, planned)***
	if yes, indicate overall type and status		☐	Targeted assessment(s)		Planned for Q2 2025 (post-PAC), including feasibility studies
			☐	Gender Analysis and Gender Action Plan		Planned during the project activities at various stages
			☐	Stakeholder Engagement Plan (inclusive of GRM plan)		In Q2 of the projects and where applicable
			☐	ESIA (Environmental and Social Impact Assessment)		
			☐	SESA (Strategic Environmental and Social Assessment)		
	Are management plans required? (check if "yes)	☐				
	If yes, indicate overall type		☐	Targeted management plans: Environmental and Social Action Plan		
			☐	Gender Action Plan		To be developed at various stages of project implementation (where applicable)

			☐	ESMP (Environmental and Social Management Plan which may include range of targeted plans)	Planned for Q2 2025 (for EWS and energy projects)
			☐	ESMF (Environmental and Social Management Framework)	
	Based on identified risks, which Principles/Project-level Standards triggered?		**Comments (not required)**		
	Overarching Principle: Leave No One Behind				
	Human Rights	☐			
	Gender Equality and Women's Empowerment	☐			
	Accountability	☐			
	1. Biodiversity Conservation and Sustainable Natural Resource Management	☐			
	2. Climate Change and Disaster Risks	☐			
	3. Community Health, Safety and Security	☐			
	4. Cultural Heritage	☐			
	5. Displacement and Resettlement	☐			
	6. Indigenous Peoples	☐			
	7. Labour and Working Conditions	☐			
	8. Pollution Prevention and Resource Efficiency	☐			

Final Sign Off

Final Screening at the design-stage is not complete until the following signatures are included

Signature	***Date***	***Description***
QA Assessor: Programme Officer — DocuSigned by: Anila Ajmal DC75834CC624415...	27-May-2025	UNDP staff member responsible for the project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver: ARR, Resilience, Environment and Climate Change Unit, UNDP Pakistan — Signed by: Shiraz Shah A10AC3F646DA441...	28-May-2025	UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC.
PAC Chair: DRR, UNDP Pakistan — DocuSigned by: Van Nguyen 6D879D9AF3DC425...	27-May-2025	UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

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SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks		
INSTRUCTIONS: The risk screening checklist will assist in answering Questions 2-6 of the Screening Template. Answers to the checklist questions help to (1) identify potential risks, (2) determine the overall risk categorization of the project, and (3) determine required level of assessment and management measures. Refer to the SES toolkit for further guidance on addressing screening questions.		
Overarching Principle: Leave No One Behind **Human Rights**		**Answer (Yes/No)**
P.1	Have local communities or individuals raised human rights concerns regarding the project (e.g., during the stakeholder engagement process, grievance processes, public statements)?	N
P.2	Is there a risk that duty-bearers (e.g., government agencies) do not have the capacity to meet their obligations in the project?	Y
P.3	Is there a risk that rights-holders (e.g., project-affected persons) do not have the capacity to claim their rights?	Y
Would the project potentially involve or lead to:		
P.4	adverse impacts on enjoyment of the human rights (civil, political, economic, social, or cultural) of the affected population and particularly of marginalized groups?	N
P.5	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups, including persons with disabilities? [16]	Y
P.6	restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalized individuals or groups, including persons with disabilities?	N
P.7	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	N
Gender Equality and Women's Empowerment		
P.8	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g. during the stakeholder engagement process, grievance processes, public statements)?	N
Would the project potentially involve or lead to:		
P.9	adverse impacts on gender equality and/or the situation of women and girls?	N
P.10	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	N
P.11	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being*	N
P.12	exacerbation of risks of gender-based violence? *For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc*.	Y

[16] Prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, religion, political or other opinion, national or social or geographical origin, property, birth, or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender and transsexual people.

Sustainability and Resilience: Screening questions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below		
Accountability		
Would the project potentially involve or lead to:		
P.13	exclusion of any potentially affected stakeholders, in particular marginalized groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them?	Y
P.14	grievances or objections from potentially affected stakeholders?	N
P.15	risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the project?	N
Project-Level Standards		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
Would the project potentially involve or lead to:		
1.1	adverse impacts to habitats (e.g., modified, natural, and critical habitats) and/or ecosystems and ecosystem services? *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes*	N
1.2	activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) legally protected areas (e.g., nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	N
1.3	changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	N
1.4	risks to endangered species (e.g., reduction, encroachment on habitat)?	N
1.5	exacerbation of illegal wildlife trade?	N
1.6	introduction of invasive alien species?	N
1.7	adverse impacts on soils?	N
1.8	harvesting of natural forests, plantation development, or reforestation?	N
1.9	significant agricultural production?	Y
1.10	animal husbandry or harvesting of fish populations or other aquatic species?	N
1.11	significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction*	N
1.12	handling or utilization of genetically modified organisms/living modified organisms?[17]	N
1.13	utilization of genetic resources? (e.g., collection and/or harvesting, commercial development)[18]	N
1.14	adverse transboundary or global environmental concerns?	N
Standard 2: Climate Change and Disaster Risks		
Would the project potentially involve or lead to:		

[17] See the Convention on Biological Diversity and its Cartagena Protocol on Biosafety.
[18] See the Convention on Biological Diversity and its Nagoya Protocol on access and benefit sharing from use of genetic resources.

2.1	areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunami, or volcanic eruptions?	N
2.2	outputs and outcomes sensitive or vulnerable to potential impacts of climate change or disasters? *For example, through increased precipitation, drought, temperature, salinity, extreme events, earthquakes*	N
2.3	increases in vulnerability to climate change impacts or disaster risks now or in the future (also known as maladaptive or negative coping practices)? *For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding*	N
2.4	increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	Y
Standard 3: Community Health, Safety and Security		
Would the project potentially involve or lead to:		
3.1	construction and/or infrastructure development (e.g., roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams)	Y
3.2	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	Y
3.3	harm or losses due to failure of structural elements of the project (e.g., collapse of buildings or infrastructure)?	N
3.4	risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	Y
3.5	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	Y
3.6	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)?	N
3.7	influx of project workers to project areas?	Y
3.8	engagement of security personnel to protect facilities and property or to support project activities?	Y
Standard 4: Cultural Heritage		
Would the project potentially involve or lead to:		
4.1	activities adjacent to or within a Cultural Heritage site?	N
4.2	significant excavations, demolitions, movement of earth, flooding, or other environmental changes?	N
4.3	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	N
4.4	alterations to landscapes and natural features with cultural significance?	N
4.5	utilization of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	N
Standard 5: Displacement and Resettlement		
Would the project potentially involve or lead to:		
5.1	temporary or permanent and full or partial physical displacement (including people without legally recognizable claims to land)?	N

5.2	economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	N
5.3	risk of forced evictions?	N
5.4	impacts on or changes to land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	N
Standard 6: Indigenous Peoples		
Would the project potentially involve or lead to:		
6.1	areas where indigenous peoples are present (including project area of influence)?	N
6.2	activities located on lands and territories claimed by indigenous peoples?	N
6.3	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? *If the answer to screening question 6.3 is "yes", then Standard 6 requirements apply, and the potential significance of risks related to impacts on indigenous peoples must be Moderate or above.* [*]	N
6.4	the absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	N
6.5	the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	N
6.6	forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? *Consider, and where appropriate ensure, consistency with the answers under Standard 5 above*	N
6.7	adverse impacts on the development priorities of indigenous peoples as defined by them?	N
6.8	risks to the physical and cultural survival of indigenous peoples?	N
6.9	impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? *Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.*	N
Standard 7: Labour and Working Conditions		
Would the project potentially involve or lead to: (note: applies to project and contractor workers)		
7.1	working conditions that do not meet national labour laws and international commitments?	Y
7.2	working conditions that may deny freedom of association and collective bargaining?	N
7.3	use of child labour?	Y
7.4	use of forced labour?	N
7.5	discriminatory working conditions and/or lack of equal opportunity?	N
7.6	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	Y

[*] Note: revised July 2022 modifying presumption of risk significance from Substantial or higher to Moderate or higher.

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Standard 8: Pollution Prevention and Resource Efficiency		
Would the project potentially involve or lead to:		
8.1	the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	Y
8.2	the generation of waste (both hazardous and non-hazardous)?	Y
8.3	the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	N
8.4	the use of chemicals or materials subject to international bans or phase-outs? *For example, DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention*	Y
8.5	the application of pesticides that may have a negative effect on the environment or human health?	Y
8.6	significant consumption of raw materials, energy, and/or water?	N

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2. Project Risk Register Table

#	Event	Cause	Impact(s)	Risk Category & Sub-category	Impact, Likelihood & Risk Level	Risk Valid From/To	Risk Owner	Risk Treatment & Treatment Owner
1	**If there are any delays in technology deployment**	Due to procurement delays and logistical challenges	This may result in delay in the installation of monitoring devices; gaps in early warning coverage, and reduced disaster response effectiveness	**Operational:** Delivery; **Organizational:** Implementation arrangements	Likelihood:2 - Low likelihood Impact: 1 - Negligible Risk level: LOW (equates to a risk appetite of MINIMAL	From: 01-Mar-25 To: 29-Feb-28	Programme Analyst, RECCU	**Treatment 1.1:** Streamline procurement via pre-qualification processes. **Treatment 1.2:** Establish contingency logistics plans and monitor progress closely. **Risk treatment Owner:** Project Manager
2	**If there is an Inadequate Community Engagement and Communication**	Due to cultural and linguistic mismatches; insufficient stakeholder consultation	This may result in reduced adoption of early warning systems; lower community responsiveness; potential exclusion of vulnerable groups	**Social and Environmental:** Stakeholder Engagement; **Social and Environmental:** Gender equality and women's empowerment	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 01-Mar-25 To: 29-Feb-28	Programme Analyst, RECCU	**Treatment 2.1:** Develop culturally tailored, multi-channel communication strategies. **Treatment 2.2:** Conduct regular community consultations and training sessions. **Treatment 2.3.** Keep track of GRM for any greievnce during the project **Risk treatment Owner:** Project Manager

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#	Event	Cause	Impact(s)	Risk Category & Sub-category	Impact, Likelihood & Risk Level	Risk Valid From/To	Risk Owner	Risk Treatment & Treatment Owner
3	**If there is insufficient Funding and Cash Flow**	Due to budget constraints, delayed disbursements, or financial mismanagement	This may result hindered implementation of project activities; delays in procurement; reduced operational capacity	**Financial:** Budget availability and cash flow; **Financial:** Cost recovery	Likelihood:2 - Low likelihood Impact: 1 - Negligible Risk level:LOW (equates to a risk appetite of MINIMAL)	From: 01-Mar-25 To: 29-Feb-28	Programme Analyst, RECCU	**Treatment 3.1:** Secure multi-year funding commitments and contingency funds. **Treatment 3.2:** Implement rigorous financial monitoring and reporting. **Risk treatment Owner:** Project Manager
4	**If there is weak Inter-agency Coordination and Data Sharing**	Due to fragmented governance; lack of standardized protocols; poor inter-agency communication	This may result in inefficient disaster response; gaps in early warning coverage; delays in decision-making	**Organizational:** Implementation arrangements; **Organizational:** Monitoring and oversight	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 01-Mar-25 To: 29-Feb-28	Programme Analyst, RECCU	**Treatment 4.1:** Develop and implement unified SOPs for data sharing. **Treatment 4.2:** Establish an interactive dashboard and hold regular inter-agency workshops. **Risk treatment Owner:** Project Manager
5	**If there are regulatory and Policy Changes**	Due to shifts in national/international regulatory frameworks	This may result in delays in project approvals; increased compliance costs; potential need to modify project scope	**Regulatory:** Changes in the regulatory framework	Likelihood:2 - Low likelihood Impact: 1 - Negligible Risk level:LOW (equates to a risk appetite of MINIMAL)	From: 01-Mar-25 To: 29-Feb-28	Programme Analyst, RECCU	**Treatment 5.1:** Continuously monitor regulatory developments and engage with policymakers. **Treatment 5.2:** Adapt project design and processes as needed to ensure compliance.

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#	Event	Cause	Impact(s)	Risk Category & Sub-category	Impact, Likelihood & Risk Level	Risk Valid From/To	Risk Owner	Risk Treatment & Treatment Owner
								Risk treatment Owner: Project Manager
6	**If there are adverse Social and Environmental Impacts**	Due to inadequate ESMP; failure to address stakeholder grievances; mismanagement of natural resources	This may result in negative impacts on community health due to emissions, biodiversity, cultural heritage; increased grievances	**Social and Environmental:** Biodiversity conservation and sustainable resource management; **Social and Environmental:** Grievances (Accountability to stakeholders)	Likelihood:3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 01-Mar-25 To: 29-Feb-28	Programme Analyst, RECCU	**Treatment 6.1:** Conduct comprehensive ESMP **Treatment 6.2:** Implement robust grievance redress mechanisms and engage continuously with local communities. **Risk treatment Owner:** Project Manager
7	**If there are security of the and safety of the concerned persons is compromised/mishandled**	Due to exposure to natural hazards, political instability, cybersecurity threats, or local conflicts	This may result into risking of project staff; disruption of activities; potential harm to beneficiaries	**Operational** (3.7. Occupational safety, health and well-being)	Likelihood: 3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 01-Mar-25 To: 29-Feb-28	Programme Analyst, RECCU	**Treatment 7.1:** Adherence to the Government/UN protocol regarding safety and security. **Treatment 7.2:** Establish a proper protocol for team meetins to monitoring any risks **Risk treatment Owner:** Project Manager

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#	Event	Cause	Impact(s)	Risk Category & Sub-category	Impact, Likelihood & Risk Level	Risk Valid From/To	Risk Owner	Risk Treatment & Treatment Owner
8	**If there are unsustainable agricultural and energy practices that harm biodiversity and natural resources.**	Due to poor enforcement of sustainable land-use policies, and a lack of awareness among beneficiaries.	This may result in soil degradation, biodiversity loss, or water contamination, potentially reducing long-term project sustainability.	**Social and Environmental:** Biodiversity conservation and sustainable resource management; **Social and Environmental:** Grievances (Accountability to stakeholders)	Likelihood:3 - Moderately likely Impact: 3 - Intermediate Risk level: MODERATE (equates to a risk appetite of EXPLORATORY)	From: 01-Mar-25 To: 29-Feb-28	Programme Analyst, RECCU	**Treatment 6.1:** Develop a comprehensive ESMP **Risk treatment Owner:** Project Manager