



SDG Insights

Authored by: Zarak Jamal Khan (Assistant Manager - Research and Reporting Department - PMIC)
Reviewed by: Rimsha Taj (Assistant Vice President - Research and Reporting Department - PMIC)
Designed by: Constantine PR & Communications



The SDG Insights is a quarterly series initiated by PMIC, commencing from the first quarter of 2024. This series aims to highlight the interconnection between each Sustainable Development Goal (SDG) and the microfinance sector throughout the year. The primary objective of this initiative is to contribute to the tracking and acceleration of efforts towards achieving the Sustainable Development Goals in Pakistan.

The SDG Insights series is meticulously crafted with its target audience in mind, aiming to enable the following:

- Provide pertinent information on current opportunities for microfinance partners to foster product innovation.
- Offer an overview of the funding requirements and gaps for donors to make targeted contributions.
- Present a comprehensive view of the microfinance sector's contributions towards specific SDGs.

In this inaugural issue, PMIC delves into Sustainable Development Goal 13 (SDG-13), with a particular focus on climate action. This insight begins by showcasing a success story from a microfinance client, underscoring the sector's impact on climate-resilient development. Subsequently, it establishes the nexus between climate action and the microfinance sector, identifying opportunities for green financing and climate change financing within Pakistan and the microfinance industry. Furthermore, it explores potential areas for microfinance actors to consider for future engagement. Finally, the document examines how borrowers respond to inquiries regarding environmental and social management, as well as climate change indicators.

This concise overview provides a comprehensive insight into how microfinance addresses the challenges of climate action in Pakistan while simultaneously focusing on poverty alleviation.

The Nexus of Climate Action and Microfinance

SDG 13 – Climate Action calls for urgent climate change mitigation and adaptation measures on a global scale. Climate change is intricately linked with food security and hunger, poverty, health, access to clean water, energy, agricultural production, and sustainable oceans, and cities. Slow progress on SDG 13 is becoming a formidable barrier to achieving the Sustainable Development Goals (SDGs). Climate change threatens the ecological balance and poses significant economic risks, a substantial 6.3% loss of global GDP in 2022 was reported due to climate-related disruptions.

Climate change affects many development achievements and is a threat multiplier!

Developing nations, including Pakistan, bear a disproportionate burden, facing cumulative GDP losses totaling US\$21 trillion over the past three decades. Although only contributing 0.9% to global greenhouse gas (GHG) emissions, Pakistan is ranked as the eighth country in the world most vulnerable to long-term climate risk. Pakistan's vulnerability to climate change is driven by its high rates of multidimensional poverty causing greater exposure and vulnerability of disadvantaged groups to climate change, consequently disproportional loss of assets and income supplemented with their weak capacity to cope with the losses.

The threat of climate change to agriculture and the Indus Basin would also have serious socioeconomic implications for the 158 million people that belong to households in the Indus Basin. Approximately 43% of farmers are smallholders, predominantly tenant farmers (around 70% are women), managing landholdings of less than one hectare. Smallholders are most vulnerable to the impacts of climate change due to their lack of assets to buffer shocks and access to information, new technologies, finance, and government services through which they can undertake adaptive actions. It is also expected that repeated shocks will aggravate existing social inequalities and the access to resources that will, in turn, intensify social frictions leading to instability, conflict, displacement of people and changes in migration patterns.

In response, Pakistan has bolstered its climate resilience framework through updated Nationally Determined Contributions (NDC) aligning with the Paris Agreement, aiming to achieve a 50% emissions reduction by 2030. This signifies a pivotal moment for aligning financial strategies with environmental resilience at the national level. The intersection of Sustainable Development Goal 13 (SDG 13), focused on climate action, and microfinance to address multidimensional poverty presents a pivotal opportunity for Pakistan's socioeconomic landscape.

Microfinance emerges as a potent tool in this context, intertwining financial inclusion with climate adaptation strategies. Recognized as a driver of socioeconomic progress, microfinance channels

resilience-building measures to vulnerable communities, mitigating poverty and enhancing adaptive capacities. The nexus between microfinance and SDG 13 underscores the importance of inclusive financial systems in advancing sustainable development objectives. Enhanced financial access not only fosters individual prosperity but also catalyzes progress across critical domains such as health, education, and gender equality.

Considering these imperatives, this insight delves into the synergies between microfinance and climate resilience, offering strategic pathways for stakeholders in Pakistan's microfinance sector, regulators, and key players alike to harness the transformative potential at the convergence of financial inclusion and environmental sustainability.

Combating Climate Change with Renewable Energy

Aligned with the national priority of transitioning to 60% renewable energy, PMIC has been spearheading the PMIC-KfW Renewable Initiative through Microfinance (PRIME) project since 2019, spanning approximately twenty districts across Pakistan. Their mission: to expedite access to renewable energy sources for small farmers.

Ali Gul Jamali, a humble farmer hailing from Qazi Hussain Jamali in the Dadu district of Sindh province. Plagued by financial woes exacerbated by soaring diesel and electricity costs, Ali's livelihood teetered on the brink of collapse. But fate had a different plan for him.

Through SAFCO Microfinance, a glimmer of hope emerged for Mr. Jamali in the form of a loan opportunity under the PRIME project. With determination, he seized this lifeline and invested it wisely – in the installation and activation of solar panels. Today, his farm hums with the quiet efficiency of solar-powered machinery, a stark departure from the uncertainty of traditional energy sources.

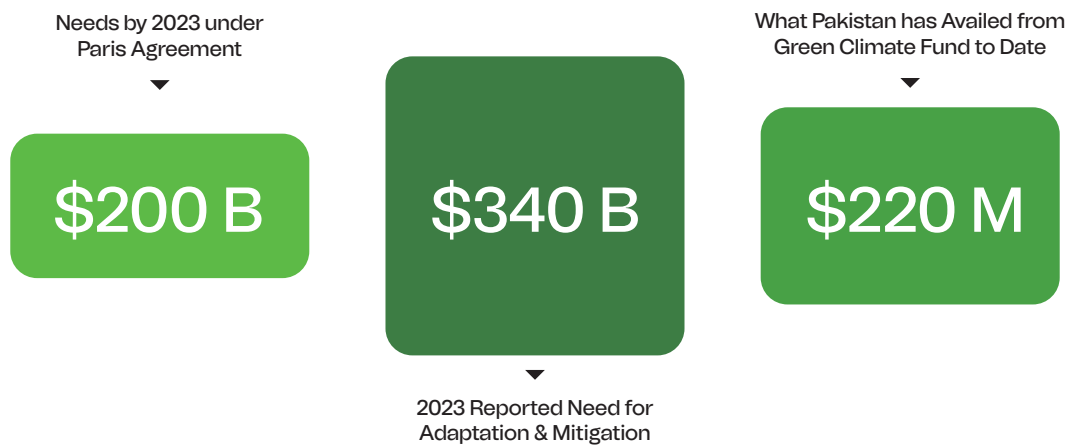
No longer at the mercy of erratic supply and exorbitant expenses, Ali's newfound reliance on renewable energy has indirectly resulted in further benefits including early sowing and crop diversification, he stands as a testament to the transformative prowess of sustainable practices.

"I owe my thriving farm to renewable energy," declares Mr. Jamali, with pride in his eyes. Through increased and consistent production, his once-tenuous livelihood has turned prosperous. Today, he stands as a beacon of sustainable agriculture, a living embodiment of the monumental impact of renewable energy on rural communities.



Green Financing & Climate Change Financing Opportunities

Climate change is a threat to which the poor are vulnerable, and microfinance is a tool that can reduce the vulnerability of the poor - linking MF to climate change adaptation is of considerable importance. Microfinance holds promise in its ability to reach hundreds of thousands of poor families, aided by technological advancements like branchless banking and enhanced financial access. Green microfinance promoting sustainable resources can contribute to reducing vulnerability in the long term. Moreover, MF, when combined with education and other interventions, can serve as a tool for climate change adaptation by reaching vulnerable populations with financial support.



Pakistan's Climate Need vs Reality

\$340b is determined by updated NDC 2021 by GOP and
 \$200b was determined under the Paris agreement 2016.

Nationally Determined Contributions (NDCs) are based on the aggregation of the GOP set goals to be achieved by 2030 under Paris agreement which were updated in 2021. One of the major milestones to be achieved by 2023, is to voluntary contribution of 50% reduction of Pakistan projected emissions by 2030. The focus of NDC is on the new sectors (Blue carbon ecosystems, health, waste, carbon markets & air pollution) and inclusive growth for youth and gender. Under NDC the priority actions are as under:

Mitigation:

- Achieving Renewable energy 60% by 2030.
- Moratorium on new coal power plant. No generation of power through imported coal.
- Electric vehicles to be 30% by 2030.
- Continued investment in Nature-based Solutions (NbS).

Adaptation:

- Indus Basin-flood risk mitigation & enhanced water recharge.
- Enhancing protected areas cover from 12% to 15% by 2023.

1. Financial services as a tool to build resilience in the face of shocks related to climate change.

One reason the poor are most at risk is that they lack the tools to help them cope with the challenges to their health and livelihoods that accompany climate change. Providing access to formal financial services, such as insurance, savings, or loans, can help the poor smooth consumption when they face unexpected setbacks

2. Financial services as a mechanism to increase the accessibility, affordability, and usage of cleaner technology that reduces contributions to climate change.

Specially designed financial services may allow the poor to be able to make affordable investments in environmentally friendly practices, lessening environmental damage.

WAYS TO STRENGTHEN RESILIENCE

include a) reducing the exposure to risks, b) reducing the sensitivity of systems to shocks (e.g., using drought-resistant crop varieties) and c) increasing adaptive capacity (e.g., modifying a system). Measures can be taken ex-ante, ex-post or during shocks and they comprise actions aimed at increasing resilience in ecosystems as well as in social and economic systems.

Microfinance can help build assets and coping mechanisms over time. Despite the challenges in balancing gains with sustainable practices, Microfinance products coupled with eco-sustainable farming practices contributes to vulnerability reduction and climate adaptation in Pakistan.

Credit	Savings	Insurance	Non-Financial	Innovation
Specific loan products supporting investments in renewable energy, farms, and businesses resilient to climate impacts (asset building and diversification) as well as non-income generating purposes (home improvement or emergency funding). Effective credit products incorporate terms and conditions designed to promote resilient practices.	Targeted savings products are specifically designed to enhance climate change resilience, enabling the population to undertake long-term asset investments, manage predictable expenses, and address emergencies through access to suitable savings products. These products may include fixed-term deposits with the flexibility to withdraw without penalties in instances of disasters influenced by climate change.	Insurance products to protect the livelihoods and investments of poor and vulnerable people against the adverse impacts of climate change. Examples may include index (or non-index) flood, weather, property, crop, or livestock insurance - among others.	Non-financial products and services can facilitate resilience and/or complement financial products and services by filling a capacity gap, including via Awareness-raising and capacity-building concerning climate risks, such as technical assistance and training. Encouraging the development of and adherence to relevant standards that strengthen vulnerable populations' resilience to climate change, for example, minimum building standards	Technologies that enable institutions and target populations to strengthen clients' resilience, lower costs, help to identify and address sector-specific risks and barriers, forecast extreme weather events and trends, conduct climate risk assessments, sustainable soil, and water management, and provide information tools for climate risk screenings.

(Innovation for Poverty Actions)
(FAO - Food & Agriculture Organization)

POTENTIAL AREA

CLEAN COOKING SOLUTIONS TO REDUCE USAGE OF FOSSIL FUELS SUCH AS COAL OR BIOMASS SUCH AS WOOD

BUSINESS MODEL

Promote the replacement of traditional firewood stoves with improved cookstoves (including electric rice cookers) or with the use of liquified petroleum gas (LPG) (green char-briquettes or biogas from a biodigester system) and sell induction technology.

IMPACT

Provision of clean cooking solutions to reduce air - pollution and improve the quality of working conditions. for household particularly women, and children.

BENEFICIARIES

People: Users benefit from the usage of char-briquettes which burn longer, at about five hours, creating no sparks and significantly less smoke. Charcoal briquettes save approximately \$60 per year (30% of total fuel cost), as the briquettes produce more heat and less waste than wood charcoal¹.

MARKET

According to a study, 75% of Pakistani households still use firewood or charcoal as cooking fuel¹. Green char briquettes alone are estimated to result in an annual demand of over ten million tons of biomass briquettes.

Approximately 40% of Pakistanis have access to a clean cooking stove ².

RISKS AND MITIGATION

Market Risks: Limited supply could limit the impact or cause the need to import because there is not enough locally sourced material to satisfy the demand.

Impact Risks: Due to a lack of education, affordability, and the inability to quickly scale up stove changeover, households may prefer using wood and coal, instead of switching to cleaner fuels.

Mitigation: The microfinance sector can play a critical role in mitigating market and impact risks associated with clean cooking initiatives by investing in local supply chains, promoting diversification of supply sources, facilitating partnerships, providing financial incentives, offering education, and training, and supporting scalable solutions. By leveraging their resources and expertise, MFIs can contribute to improving access to clean cooking technologies and reducing the reliance on traditional fuels, leading to positive health, environmental, and socioeconomic outcomes for households and communities.

OTHER SDG AREAS



1- <https://www.fao.org/3/w7519e/w7519e05.htm>

2- [dpi.org/only-40pc-Pakistanis-have-access-to-clean-cooking-energy/news_detail](https://www.dpi.org/only-40pc-Pakistanis-have-access-to-clean-cooking-energy/news_detail)

POTENTIAL AREA

SUSTAINABLE AGRICULTURE SOLUTIONS TO INCREASE PRODUCTIVITY FOR SMALL & MEDIUM FARMERS & THE COTTAGE INDUSTRY

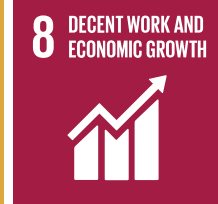
BUSINESS MODEL

Invest in the provision (selling or renting/leasing) of equipment and information services to increase agricultural productivity in a climate-resilient manner using modern sustainable methods of regenerative systems, irrigation, greenhouse, and solar technology for productive use and quality inputs.

IMPACT

Sustainable agriculture development to improve crop yield, farmers' income, and quality of life of rural communities, while also ensuring reduction in carbon emissions and reversal of climate change

OTHER SDG AREAS



BENEFICIARIES

People: Farmers benefit from improved productivity and higher income. Farm laborers (including rural women) benefit by gaining technical knowledge and reduced labor drudgery. The population benefits from better quality produce available domestically.

Marginalization: Women and vulnerable communities benefit from the adoption of climate-resilient and sustainable agriculture practices that may provide them with improved income streams.

MARKET ENVIRONMENT

Agriculture contributes 19.2 per cent to the GDP and provides employment to around 38.5 per cent of the labor force¹. More than 65-70 per cent of the population depends on agriculture for its livelihood². The agricultural value chains suffer from post-harvest inefficiencies, lack of traceability, and lack of farmer-buyer linkages. Hence, there are large market gaps in terms of supply chains and the distribution of services and products, which need to be addressed.

RISKS AND MITIGATION

Market Risks: Agricultural value chains currently suffer from a very low structuration level, which can be a challenge when moving to an organized and streamlined supply chain. In addition, poor in-country coordination and infrastructure can cause post-harvest losses and affect profitability.

Impact Risks: Farmers often borrow money from local intermediaries to expand their businesses and increase yields, which burdens them to sell their harvest at exceptionally low prices, resulting in losses. In addition, if the benefits of the model do not expand across Pakistan, it will reinforce existing regional and income disparities.

Mitigation: The microfinance sector plays a crucial role in mitigating market and impact risks in agricultural value chains by providing financial services, capacity building, market linkages, and advocacy efforts aimed at improving the livelihoods of smallholder farmers and promoting inclusive economic growth. The microfinance partners should address agriculture financing using an ecosystem approach with an appropriate and targeted graduation plan for shifting to newer methods and technologies. MFIs can develop innovative financial products, such as crop insurance or warehouse receipt financing, to help farmers manage market-related risks. These products provide farmers with financial protection against price fluctuations and losses due to post-harvest issues.

1- https://www.finance.gov.pk/survey/chapters_21/02-Agriculture.pdf

2- https://www.finance.gov.pk/survey/chapters_21/02-Agriculture.pdf

POTENTIAL AREA

PRIVATE FOREST MANAGEMENT FOR SUSTAINABLE LIVELIHOOD AND INCOME GENERATION ACTIVITIES

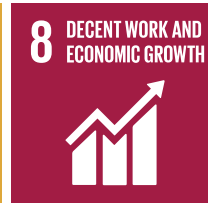
BUSINESS MODEL

Invest in commercial reforestation to develop sustainable, high-value timber, teak, bamboo, and other agricultural assets in Pakistan, and in the plantation of rubber or other key tree products to expand Pakistan’s export income.

IMPACT

Contribute to reforestation initiatives to protect natural resources and reduce environmental degradation.

OTHER SDG AREAS



BENEFICIARIES

People: The local population benefits from a reduction in forest crimes, which often result in their displacement or resettlement due to loss of land.

Marginalization: The Indigenous population benefits from the provision of alternative employment or business opportunities (such as bamboo farming), which promise them increased income.

MARKET ENVIRONMENT

Pakistan has a forest cover of 4.8%one & has one of the highest rates of deforestation in the world as the economy depends heavily on wood for timber, heat, and power generation, while 75.9 per cent of households use wood or charcoal for cooking2. In 2010, Pakistan had 648 kha of tree cover, extending over 0.74% of its land area. In 2022, it lost 49 ha of tree cover, equivalent to 19.3 kt of CO₂ emissions3. There is a need to invest in commercial reforestation or agroforestry to reduce deforestation, improve sustainable management of Pakistan’s forests, and support the livelihoods of local populations. Large-scale plantation forestry income accounted for \$390 million in 2011, according to a FAO report (2018).

RISKS AND MITIGATION

Market Risks: Reforestation needs to be supported with subsidies to be competitive against more profitable uses of forest resources/products, such as Olive production. Concessions must be vetted, approved, and authorized by the Department/s of the concerned Ministry/s, which is charged with protected area oversight.

Impact Risks: Excessive privatization of forest areas may interfere with natural habitats and ecosystems that go beyond concession areas. Moreover, in the absence of adequate regulations, rural communities, as well as land areas, may be exploited.

Mitigation: The microfinance sector can play a crucial role in mitigating market and impact risks associated with reforestation initiatives by providing subsidized financing, capacity building, facilitating regulatory compliance, promoting community engagement, encouraging sustainable practices, and advocating for policy reform. By leveraging their resources and expertise, MFIs can support efforts to promote sustainable forest management and conservation while safeguarding the interests of local communities and ecosystems.

1- World Bank Indicator – Forest Cover (2021)
 2- <https://www.fao.org/3/w7519e/w7519e05.htm>
 3- <https://www.globalforestwatch.org/dashboards/country/PAK/>

POTENTIAL AREA

PIPED WATER SYSTEMS (PWS) FOR PERI-URBAN AND RURAL AREAS IN PAKISTAN

BUSINESS MODEL

Invest in the supply and distribution of affordable and safe piped water to rural households through PWS, which cover the entire water value chain from source to consumer household or in a segment of this value chain. The business model can be under a PPP arrangement with Governmental agencies, Bilateral and Multilaterals.

IMPACT

Expansion of PWS across rural and remote areas to reduce regional disparities in access to affordable and clean water.

BENEFICIARIES

People: The rural population benefits from reduced regional disparities in the supply of clean and safe water.

Marginalization: Vulnerable communities benefit from a low-cost supply of clean water, which helps to ensure their improved health and well-being. Women benefit as the burden of acquiring water for the household from far distances is reduced.

MARKET ENVIRONMENT

60–70% of the total population in Pakistan relies directly or indirectly on groundwater for their livelihood¹. Furthermore, according to an estimate 70% do not have access to safe drinking water². The development of piped water distribution is needed to bridge this gap. In Pakistan, this development (especially in rural areas) is led by public utilities sector operators, rather than by the private sector. New business models are also emerging, with companies managing a portfolio of systems, and thus increasing the returns generated.

RISKS AND MITIGATION

Market Risks: The low willingness of households to connect to PWS can be a significant barrier to expansion of networks. Expansion of PWS to new regions requires significant investment flow. In addition, most of the rural population resides far from the networks, resulting in high transportation costs.

Impact Risks: Due to lack of support infrastructure, many people may still be required to travel long distances to access PWS. Health issues of rural communities will persist if the installed pipelines are not durable, or the equipment for water treatment is not adequate.

Mitigation: the microfinance sector can play a vital role in mitigating market and impact risks associated with the expansion of piped water systems by providing affordable financing, supporting infrastructure investment, addressing transportation costs, promoting capacity building, facilitating access to quality equipment, and conducting monitoring and evaluation activities. By leveraging their resources and expertise, MFIs can contribute to increasing access to clean water for rural communities and improving public health outcomes

OTHER SDG AREAS



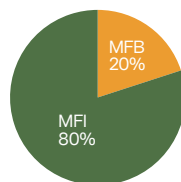
1- Groundwater Governance in Pakistan: From Colossal Development to Neglected Management

2- Groundwater Governance in Pakistan: From Colossal Development to Neglected Management

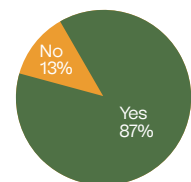
Sector Outlook

Drawing from the insights garnered through the questionnaire, the sector outlook section serves as a tool for assessing and monitoring the progress of the Microfinance sector on Environmental and Social Management (ESM) Policies and Climate Change, Mitigation and Adaptation practices. This segment provides valuable insights into the current state, trends, and challenges within the sector. The sector outlook helps inform strategic decisions and collaborative efforts aimed at promoting sustainable growth and resilience in microfinance. The sample includes 16 PMIC borrowers.

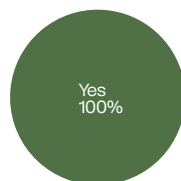
MFPs desegregation based on their type:



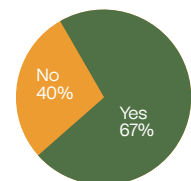
Does your organisation monitor/track progress on ESM policies?



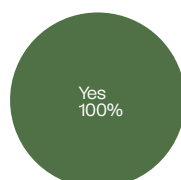
Does your organisation have an Environmental and Social Management (ESM) Policy Framework?



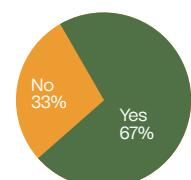
Does your organisation have dedicated resources/allocated budget for ESM monitoring?



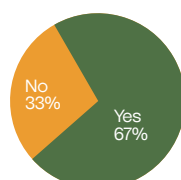
Is your organisation implementing any Environmental and Social Management (ESM) policies?



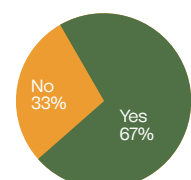
Does your institution have specific (internal/external) initiatives or practices aimed at reducing its carbon footprint?



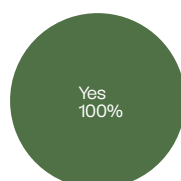
Does your organisation have dedicated resources/allocated budget for ESM implementation?



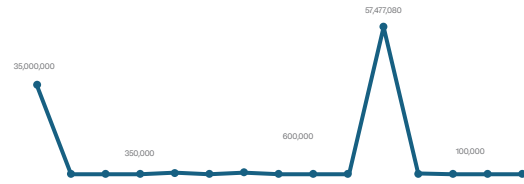
Does your institution offer any financial products or services that contribute to climate resilience, mitigation, and adaptation?



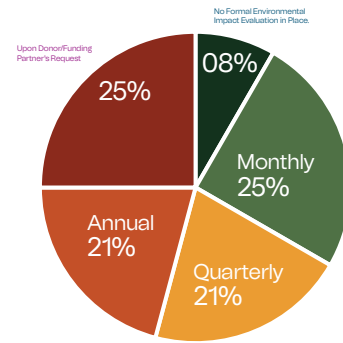
Does your organisation have an Environmental and Social Management (ESM) Policy Framework?



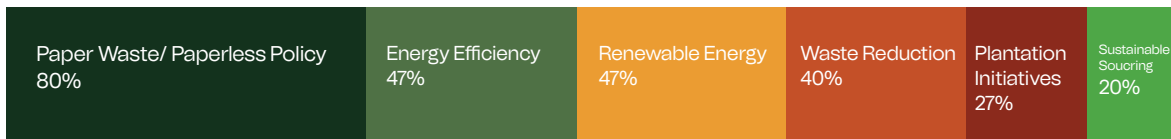
What is the allocated budget for ESM implementation? (in PKR)



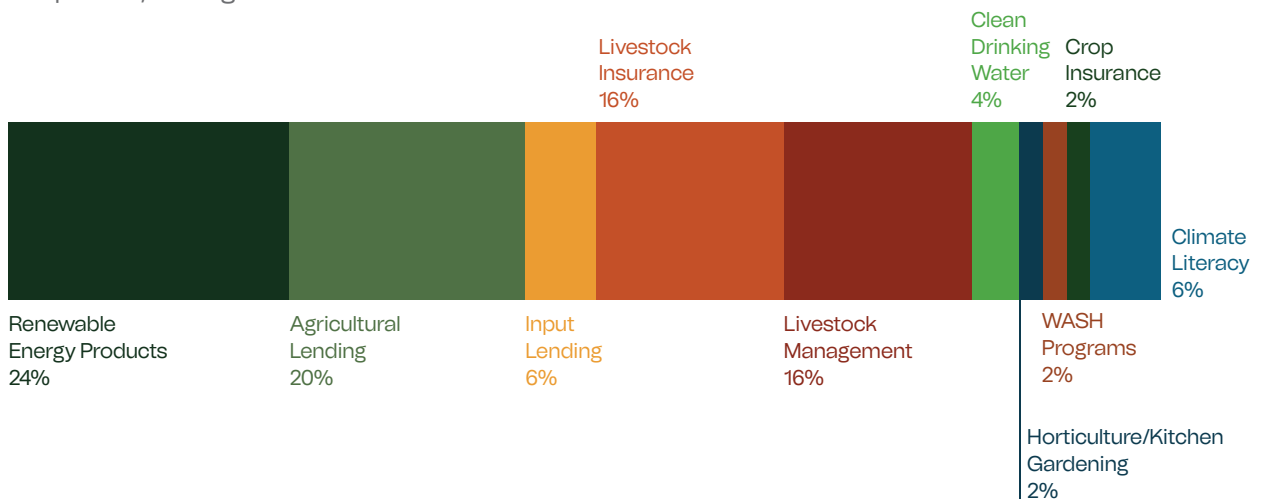
How frequently does your institution monitor and evaluate the impact of its environmental initiatives and practices?



Key climate resilience, adaptation, and mitigation initiatives your institution has implemented internally:





Does your institution offer any financial products or services that contribute to climate resilience, adaptation, & mitigation?





 215 Floor, Ufone Tower,
55 C Main Jinnah Avenue Blue Area,
Islamabad 44000 Pakistan

 Tel: (+92-51) 8487820 45
 Email: info@pmic.pk
 Website: www.pmic.pk