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Headline: Localisation of SDG 15 - opportunities for agri sector

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Pakistan's agriculture faces severe challenges, but adopting SDG 15 practices like ecosystem restoration.



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Pakistan's agriculture sector, contributing 24% to GDP and employing 37.4% of the population, is the backbone of the economy. However, land degradation, water scarcity, deforestation and climate change threaten its sustainability. According to the Pakistan Economic Survey 2023-24, approximately 57.88 million hectares of Pakistan's land is degraded, suffering from salinity, erosion and fertility loss. Water availability has also decreased significantly, with surface water dropping 29.8% to 72.7 million acre-feet (MAF) in 2022-23. These issues jeopardise food security and livelihoods. The localisation of Sustainable Development Goal (SDG) 15, focusing on ecosystem protection and land restoration, provides a roadmap to tackle these challenges.

Degraded lands in Pakistan struggle to sustain agriculture. Countries like Ethiopia restored vast areas through community-based watershed management, using terraces, covering crops and composting to rejuvenate soil. Pakistan can replicate such practices in erosion-prone areas like Punjab and Khyber Pakhtunkhwa, coupled with training and incentives for farmers to adopt sustainable techniques. Water scarcity is another critical issue, as agriculture consumes over 90% of Pakistan's freshwater resources. India addressed this problem with initiatives like "Per Drop More Crop", which promotes micro-irrigation and efficient water use. Pakistan can adopt similar programmes by providing subsidies and training to farmers, particularly in arid areas like Sindh and Balochistan. Climate change exacerbates threats to crops like wheat and cotton. Kenya successfully implemented drought-resistant crops such as sorghum and millet, while Bangladesh introduced salt-tolerant rice for saline-affected areas. Pakistan can invest in climate-resilient crop varieties suited to its diverse climatic zones, incentivising their adoption through research and awareness campaigns.

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Deforestation further undermines agricultural sustainability, reducing biodiversity and increasing vulnerability to soil erosion and floods. The Pakistan Economic Survey 2023-24 emphasises reforestation and biodiversity conservation. South Korea engaged local communities in large-scale tree-planting projects, and Indonesia integrated agroforestry to combine crops with trees. Pakistan's Green Pakistan Program could expand to include such strategies, promoting agroforestry and incentivising community participation.

The livestock sector, contributing over 60% to agricultural value, offers great potential for sustainable development and export growth. Poor livestock management and low compliance with global standards limit Pakistan's meat export market. Australia's National Livestock Identification System (NLIS) ensures quality through traceability from farm to market. Pakistan could implement similar measures, enhancing disease control and meeting international standards to access lucrative markets in the Gulf and Southeast Asia. Sustainable livestock practices like Brazil's rotational grazing can prevent overgrazing, improve pasture productivity and reduce emissions. Community-driven approaches, as seen in Ethiopia, can also ensure productivity while preserving rangeland ecosystems.

Outdated farming practices also limit agricultural potential. Vietnam's rice-fish farming system, where rice and fish are cultivated together, enhances productivity and resource use. Pakistan can pilot such systems in water-abundant areas like Punjab and Sindh, demonstrating benefits to local farmers.

Post-harvest losses are another issue undermining the potential of Pakistan's agriculture sector. Lack of proper storage and processing facilities leads to significant wastage of crops. Thailand tackled this issue by establishing community-based storage systems and promoting value-added processing of agricultural products. Pakistan can follow suit by building cold storage facilities and processing plants, particularly for perishable crops like fruits and vegetables. These measures would reduce losses, stabilise market prices and increase farmer incomes.

The localisation of SDG 15 also provides an opportunity to enhance biodiversity in agriculture. Monoculture farming and excessive use of pesticides have reduced biodiversity in Pakistan's farmlands, making crops more vulnerable to pests and diseases. Encouraging crop diversification and intercropping, alongside integrated pest management techniques, can restore ecosystem balance. Countries like Brazil have demonstrated the benefits of biodiversity-friendly farming, which improves yields while protecting the environment. Pakistan can replicate these practices, particularly in areas facing severe pest and disease outbreaks.

Another critical aspect of SDG 15 is its focus on climate resilience. By restoring ecosystems such as forests, wetlands and grasslands, natural barriers can be created against floods and droughts. These measures not only protect farmlands but also support water conservation. Community-driven reforestation projects, like those in Ethiopia, have shown how local populations can actively participate in restoring degraded lands. Such projects in Pakistan would empower rural communities, providing both environmental and economic benefits.

Finally, aligning agricultural and livestock policies with SDG 15 can attract international funding and partnerships. Many global organisations are eager to support sustainable development initiatives. By demonstrating a commitment to sustainability, Pakistan can secure financial and technical assistance to implement advanced farming and livestock management technologies, train farmers and scale up successful models. Partnerships with countries like India, Brazil and South Korea, which have pioneered sustainable practices, could accelerate the adoption of similar strategies in Pakistan.