



CASE STUDY

**Islamic Republic of Pakistan**

Crop loan insurance as financing tool to address climate change issue in rural areas

Developed by the Sustainable Development Policy Institute (SDPI), Islamabad, Pakistan

**Introduction**

Zarai Taraqiati Bank Limited (Agriculture Development Bank Limited) is the premiere agriculture sector Development Finance Institute of Pakistan. ZTBL having the largest network of 460 branches and 32 zonal offices all over Pakistan, is catering to the credit needs of farmers for the production, development purposes and modernization of agriculture through field force of Mobile Credit Officers who deliver credit with technology at the doorstep of the farmers.

ZTBL is viewing the climate change risks through the lens of food security. Risk of reduced crop production poses immense threats for food security of the masses in Pakistan. The research divisions at ZTBL vigilantly carry out desk review based or secondary data based research to identify and initiate the sustainable agricultural practices through the Bank’s lending operations. Its climate change related schemes and initiatives are tabulated below:

Schemes/Initiatives	Achievements
<b>Shamsi Tawanai Scheme (Solar Powered Water Pumping Systems).</b>	Rs. 1.750 million during 2016.
<b>Tawanai Bachat Schemes (Bio-Gas Units to provide alternate energy source).</b>	Since it’s a new initiative, farmers have to be aware regarding benefits of biogas. With increased awareness, there will be increased demand for financing bio-gas units.
<b>Farm Forestry/Plantation of Trees and Nurseries.</b>	Under this initiative the Bank has successfully planted 230,000 trees in spring and fall seasons. The Bank is further planting trees alongside Lahore-Islamabad motorway “M2”.
<b>Promotion of Soya Bean Cultivation.</b>	A project of cultivating soya bean in 100 acres at Thatta, Sindh has been completed. Soya bean cultivation is being promoted to achieve natural fixation of the organic matter.

Source: ZTBL Annual Report 2016 and ZTBL Presentation at Regional Meeting



Apart from the above schemes/initiative, ZTBL is also ready to finance the following climate change related activities:

- Working Capital for Sulphuric Acid Generator for treatment of Saline Water.
- Drip & Sprinkler Irrigation.
- Desilting, alignment and lining of water courses.
- Promotion of open shed dairy farming.
- Promotion of DDSR (direct dry seeding of rice)
- Crop loan insurance scheme.
- Livestock borrowers' insurance scheme.

## Legal and Institutional Framework

### Country Level

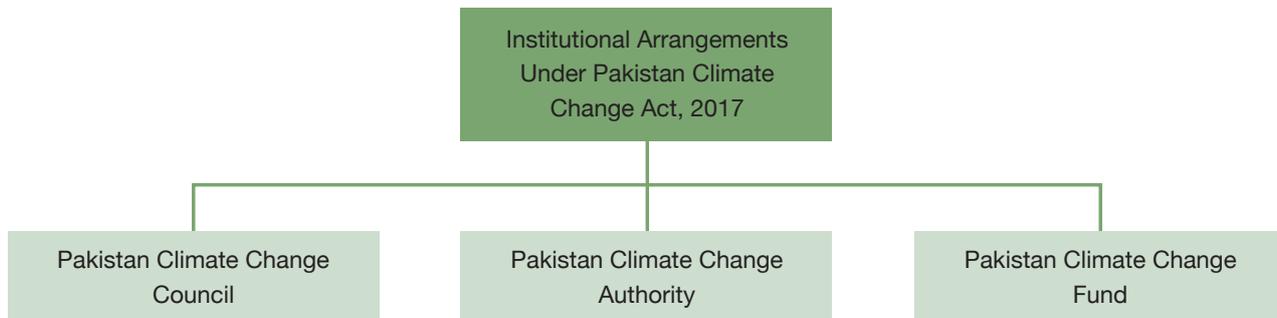
Pakistan Climate Change Act, 2017 lays the legal and institutional bedrock for climate action in Pakistan. The institutional framework laid down in the PCCA 2017, envisages formation of Pakistan Climate Change Council and Pakistan Climate Change Authority.

Prime Minister of Pakistan or his/her nominee has to serve as the Chairperson of that Council. Other members of Council include Federal Ministers of Divisions allocated with subjects of climate change, Chief Ministers of Provinces, Provincial Ministers entrusted with the climate change subject, Chairman NDMA, Chairman Pakistan Climate Change Authority, Federal Secretary of Ministry of Climate Change and 30 other members out of which 20 would be non-officials comprising representatives from Chambers of Commerce, NGOs, scientists and other relevant.

Pakistan Climate Change Authority is headed by Chairman and has specific members for Adaptation, Mitigation, Climate Finance and Coordination. Additionally, one member from each province has also to be made part of the Authority. Amongst many duties, most important duty of Authority is to manage the Pakistan Climate Change Fund. Fund also draws its legal genesis from the PCCA 2017.

Other significant functions of the Authority include:

- Formulation of comprehensive adaptation and mitigation policies, plans, programmes, projects and measures.
- Establishment of institutional and policy mechanisms for implementation of Federal and Provincial adaptation and mitigation policies.
- Preparation of proposals for suitable projects to be submitted to Green Climate Fund, Global Environment Facility, Clean Development Mechanism and Adaptation Fund.
- Preparation of NAP, NAMA, INDC and National Communication to be submitted to UNFCCC.



## ZTBL Level

ZTBL is a specialized development finance institution which is governed by State Bank of Pakistan, the central bank. In SBP, Agriculture Credit and Microfinance Department handles the regulatory matters related to ZTBL. SBP also has the Agriculture Credit Advisory Committee (ACAC) which is the national level consultative committee for setting annual targets for agricultural loans and its monitoring.

ZTBL is registered under the Companies Ordinance 1984 and works as a public limited company. It is headed by President/CEO and has an independent Board of Directors.

## Existing Climate Finance Gaps

Although there is dedicated credit line for agriculture sector in Pakistan and ZTBL is carrying out its lending operations by using that credit line, it is not enjoying any financial inflows from the international climate finance agents like Green Climate Fund, Global Environment Facility, Adaptation Fund and Clean Development Mechanism.

Agriculture sector of Pakistan is the second most carbon emitting sector in Pakistan as per the GHG Inventory reported in Pakistan's INDC document.

### Inventory of GHG Emissions in MT CO<sub>2</sub> Equivalent

	1994	2008	2012	2015	Growth Rate 1994-2015	Growth Rate 2012-2015
Energy	85.8	168.47	171.44	185.97	116.7483	8.475268
<b>Agriculture</b>	<b>71.63</b>	<b>125.97</b>	<b>162.86</b>	<b>174.56</b>	<b>143.6968</b>	<b>7.184084</b>
Industrial Process	13.29	18.54	19.59	21.85	64.40933	11.5365
Land use and forestry	6.52	9.29	9.67	10.39	59.35583	7.445708
Waste	4.45	7.24	10.55	12.29	176.1798	16.49289
Total	181.7	329.51	374.1	405.07	122.9334	8.278535

Source: Pakistan INDC

Such high amount of emissions presents great mitigation potential of agriculture sector. International climate finance, coupled with knowledge and technology transfer, can help achieve that potential.

Agriculture sector is also facing challenges because of climate hazards like droughts, unexpected rains, pest attacks and hailstorms. Therefore, adaptation needs of agriculture sector are also very high. Agri-credit lends a cushion to the adaptation needs of farmers but the volume of agri-credit is not meeting the entire demand for agricultural loans. In 2015-16, the demand for agri-credit was Rs 1,060 billion. However, only Rs. 598.3 billion was disbursed in the form of loans. Majority of these loans are lent to finance working capital needs of farmers. They don't necessarily cater to the financial needs for sustainable and climate resilient initiatives.



## Agri-Credit Demand vs Supply

Year	Demand	Supply	Requests Met
2012-13	750	336	45%
2013-14	790	391	49%
2014-15	946	516	54%
2015-16	1060	598	57%

Source: State Bank of Pakistan (2017)

## Financial Framework of the Project's Implementation

ZTBL fulfils the financial needs of farmers through loans. The loans are issued against tangible securities as collateral. Those securities include Agri Pass Book, Gold, Silver, Papers of agricultural or urban property.

## Lessons Learned/Estimated and/or Achieved Impact

ZTBL has experienced that farmers are still lacking the capacity to outsmart the climate hazards. ZTBL has a special Farmer Training Department. It works in the field for most of the year. It links up the successful/progressive farmers with average ones. Successful ones share their agronomic practices with others. As farmers learn by listening to the views of someone who is from their own community, this networking exercise proves much effective in knowledge dissemination. These initiatives also complement the efforts of Agriculture Extension Department.

During the year 2015-16, field days were conducted at different farmers training centers and in each event about 200 farmers participated and got trained in several aspects of agriculture including use of alternate energy resources.

Applications of firms dealing with solar energy, biogas, drip and sprinkler irrigation and tunnel farming have been scrutinized. Up till now 55 such firms have been enlisted to provide their products/services to the interested farmers/borrowers of the bank. Demonstration of solar energy tube wells, biogas units and use of hybrid seeds was arranged.

Crop loan insurance is such a tool that specifically address the climate change issue. Premium is charged @ 1.3% (inclusive of all taxes and levies) of loan sanctioned for Rabi and Kharif crops separately. Bank pays the premium for subsistence farmers and will get reimbursement from the Government on half yearly basis. Crop Loan Insurance Scheme covers various perils like Excessive rain, Flood, Drought, Hailstorm, Frost, Locust attack and Insect attack.

Currently ZTBL is planning to diversify insurance coverage. For example, The Bank of Punjab gives life insurance to the one who gets his tractor insured. The reason is that he is the bread earning hand of the family. To avoid the catastrophic breakdown of family, the bank also gives life insurance. In future ZTBL may also provide life insurance along with crop insurance.

## References

State Bank of Pakistan. (2017). Agriculture Credit Advisory Committee (ACAC) Review of FY 2015-16 and July-December 2016. Available from <http://www.sbp.org.pk/events/ACAC-presentation.pdf>