

Agricultural Decline in Pakistan and how to Counter it

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Agriculture of Pakistan,
 A life line to nearly 70% of
 countries population faces a catas-
 trophic decline in recent few years.
 According to Pakistan Economic Survey
 Report, 2025 Pakistan witnessed
 nearly 4-5% decline annually in
 agriculture, due to instant floods
 and changed Rain patterns. Agric-
 ulture of Pakistan is not merely
 declined due to climate impact
 but it carries multiple factors
 including Political interests, Out dated
 technical systems, and poor farming
 strategies. Thus, it could be better
 by promoting and awareing about
 Agriculture in foundational education
 as well as ⁱⁿ governmental institutions.
 In Simple, Pakistan's agriculture
 is a life line to pakistans economy
 and sustainability. Therefore proper
 mechanism and awareness are highly
 needed at country and global level.

Agriculture seems to be
declined by multiple factors but,
the major and common problem is
impact of climate change on agricul-
ture of Pakistan. The main thing
is not targeting the only factor
itself but the reasons of dwindling
and burgeoning impact of climate
change is the hot waves of heat,
unusual rainfall, cloud burst and
overflow of water from glacier melting
According to IPCC, 2003 report, planet
has warmed 1.1°C since pre-
industrial period and relatively increas-
ing without limitation. Pakistan's
geographical location sometimes called on high
notes. Because Pakistan itself carry
longest mountain ranges and widest
plateaus. These geological locations
helps climate to over react in the
region of Pakistan. For stance,
globally it is known as that cloud
burst tackles the areas of high

altitude and low pressure. Another one example of vector-borne diseases. It is also a product of climate change which is very dangerous for agricultural sector of Pakistan.

“Pakistan itself a home of 2700+ glacial lakes” as stated by WHO. A home of huge water storage and a home of great Indus Basin; still on the edge of water scarcity and slow overflow in seasons. Water scarcity is not a product of single impact but it consists of multiple factors including internal factors as well as global factors. The internal factor consists of ineffective water management, poor monitoring systems and unreliable water level sensors, and the external factors consists of regional strategic moves, unwanted behaviour of neighbour

countries and many more
of upper riparian states.

According to Global Climate

Index Report, 2005, Pakistan stands

at top most vulnerable country.

the main reason of standing at

top is frequent and rapid floods.

In 2002 Mega floods: Pakistan alone

withrased of 1500-2000 lives and

30 Billion US dollar infrastructure

loss. These infrastructure carries

huge loss in agricultural sectors.

By these floods, Pakistan is on the

verge of catastrophic and famine

risk. Water scarcity not rely only

on impact by these floods but

floods left the foot print for a

long time on respective areas

such as degraded land, droughts

for long time and loss of current
production. However, it is required
internally and globally to address

that at what cost Pakistan is paying for these climate impacts without contributing less.

Agriculture demands fertile and rich land for production. The impact of In-fertile and degraded land is a result of less production and uncompatible by the market standards. The shadows left by the floods are droughts, and land-degradation. It carries long term unavailability of production of agriculture on targeted lands. Because drought lands are not fertile and rich in resources which helps them in smooth and fertile agriculture. Agricultural production requires water, sunlight, and fertile land but if some of one is unavailable, it makes impact on fertility and production. However it is required to address these multiple factors to achieve smooth agricultural production.

A world connected by resources and water sharing systems, legally attached, and formidable for any unilateral aggression. The Agriculture Sector of Pakistan is also one of them. Pakistan also shares water with neighbour states. The Indus Basin a life line for agriculture of Pakistan also starts from upper areas of Tibetan plateau, and crossing along with the western areas of India. This water system carries a Contract of sharing water resources as per the Treaty of Indus Water, 1965, brokered by the International organization World Bank (WB). In recent events and war escalations, India called off the treaty and said it "hold in Abeyance" which is unilateral and internationally coward act. These actions made obstacles against smooth flow of Indus water system.

Resulting huge decline in production of agro-sectors.

Agriculture in Pakistan plays a front role in economy of Pakistan. According to Pakistan Economic Survey report, 2025, Agriculture contributes 21-22 percent in GDP of Pakistan. Which is major part of contribution. Currently, it seems 4-5% decline in annual production, because investors fears of frequent floods and after math results. Thus, it impacts increasingly every year. Pakistan needs to counter this catastrophic risk and creates an environment of sustainable green investment with governmental subsidies, loss protection, insured investment and resilience infrastructure.

Agriculture a sector of economic hub and life of labours needs to be improve in Infrastructure and protection of production. therefore, it is important to implement technology and modern application in agriculture to reduce risk of Agricultural downfall. Modern applications such as smart farming, climate awarner, and water level sensors. and technology of automatic warning system, seed fertility tools, product humidity meter and automated cultivation systems. These modern technology helps in increase the speed of production and decrease the risk of decline in agriculture.

In Modern world, the Concept of hybrid seeds are is increasing day by day. The feature of hybrid seed is to grow within short time the same production.

These seeds demands less water as compared to previous ones. Also, these seeds are environment adoptable, they can grow in warm temperature. However, modern world is transitioning toward modern structures. Pakistan also needs to be update and sustainable in agricultural benefits.

The Concept as described the hybrid seeds is same beneficial as the terminology of Vertical farming. Vertical farming is a farming technique used to manage effective and less land. It also reduce dependency on vast and wide lands. It is modern technique with application of Smart automatic water system, automatic environment syndrome and sufficient resources management.

Pakistan holds its position in developing countries, impacted by elite captures, political unrests, and civil-military tensions making more devastating more than previous one. These instabilities makes a tough time for investors to invest in Pakistan. Investor requires benefits and suitable gains from investing. but when it comes to catastrophic impacts it is difficult to address agricultural problems. Pakistan needs to fulfil its desired requirement and capabilities by attracting local and international investors at the time of urgent needs and the global bodies also needs to address problems of less contributors and paying more.

"Thousands live without love
but no one live without food"
(W.H. Auden)