Role of Agriculture in Green Industrialization in Pakistan

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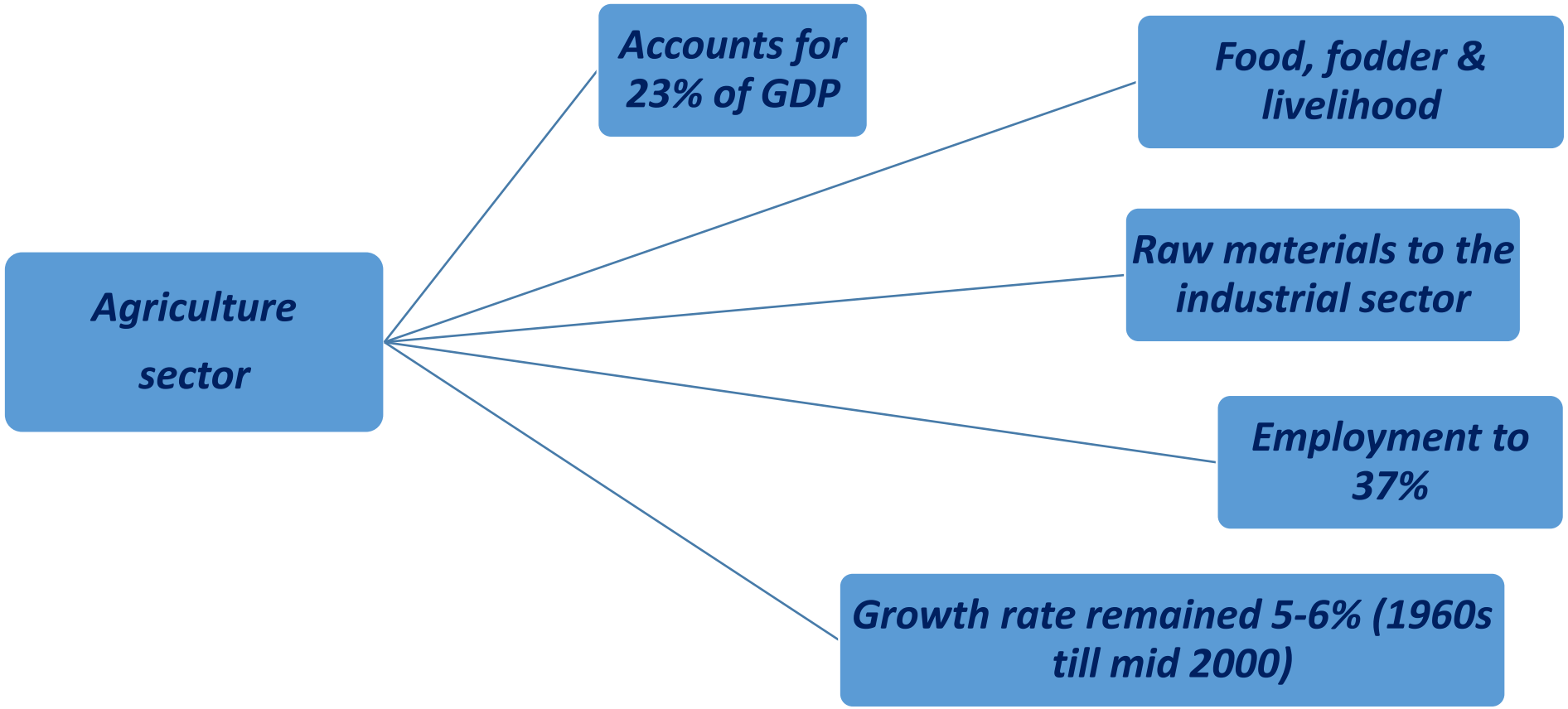
Background


Agriculture sector
Accounts for 23% of GDP
Food, fodder & livelihood
Raw materials to the industrial sector
Employment to 37%
Growth rate remained 5-6% (1960s till mid 2000)

Gaps & shortcomings

Changes

- Production couldn't to keep pace with growing population
- Food demand trends, increase in incomes, urbanization, & liberalization of markets

Problems

- Use of scarce foreign exchange to feed its population
- Ancillary activities, supply chain, & this rural employment affected

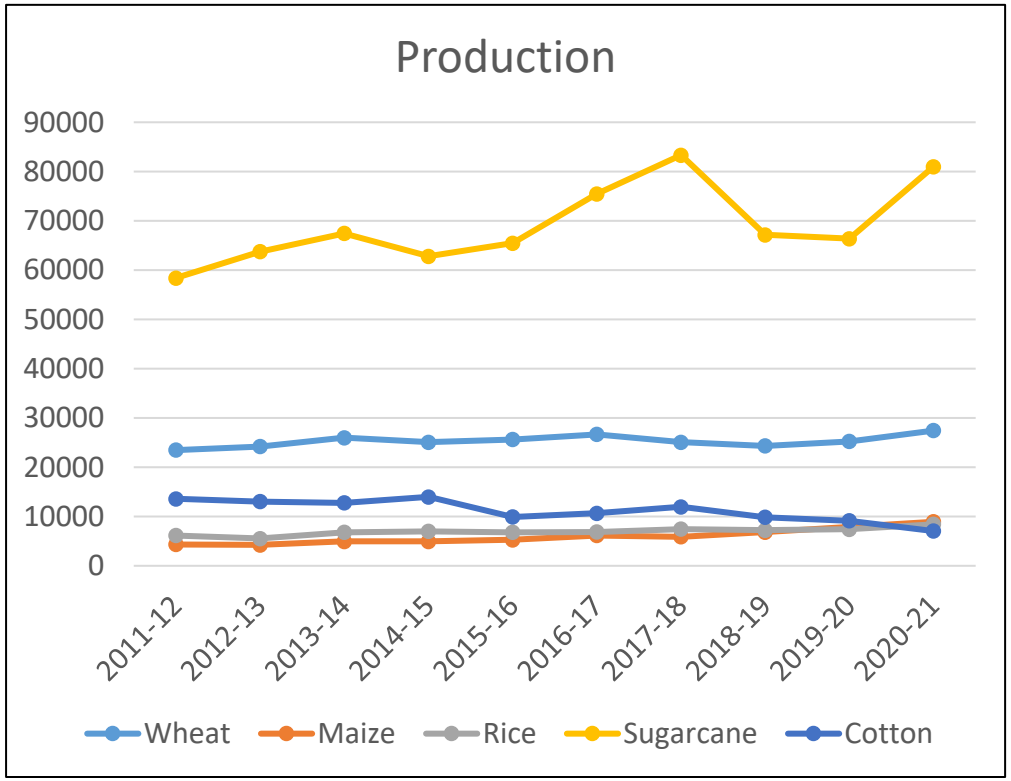
Problems

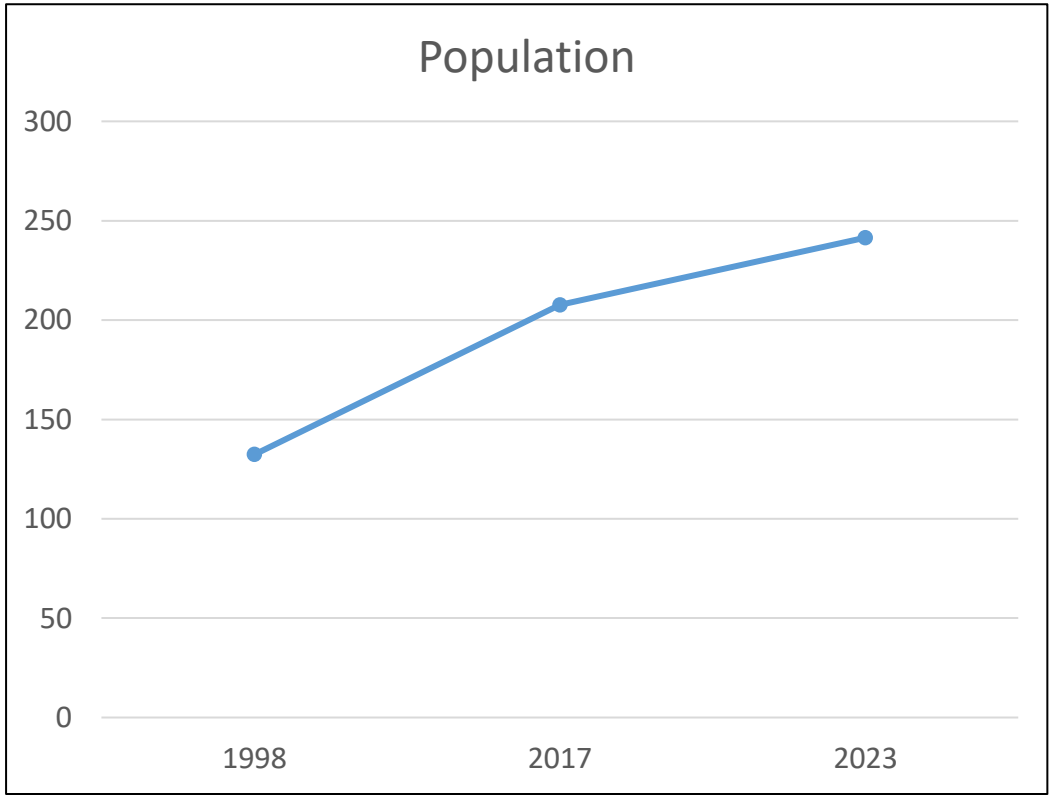
- Food inflation, poverty, unemployment, poor income distribution, current account
- current account and food security challenges

Problems

- Irrigation issues, procurement of crops' yield, availability of cold storage, supply chain & price issues are not addressed, resulting in **unstable input and output markets**

Gaps & shortcomings





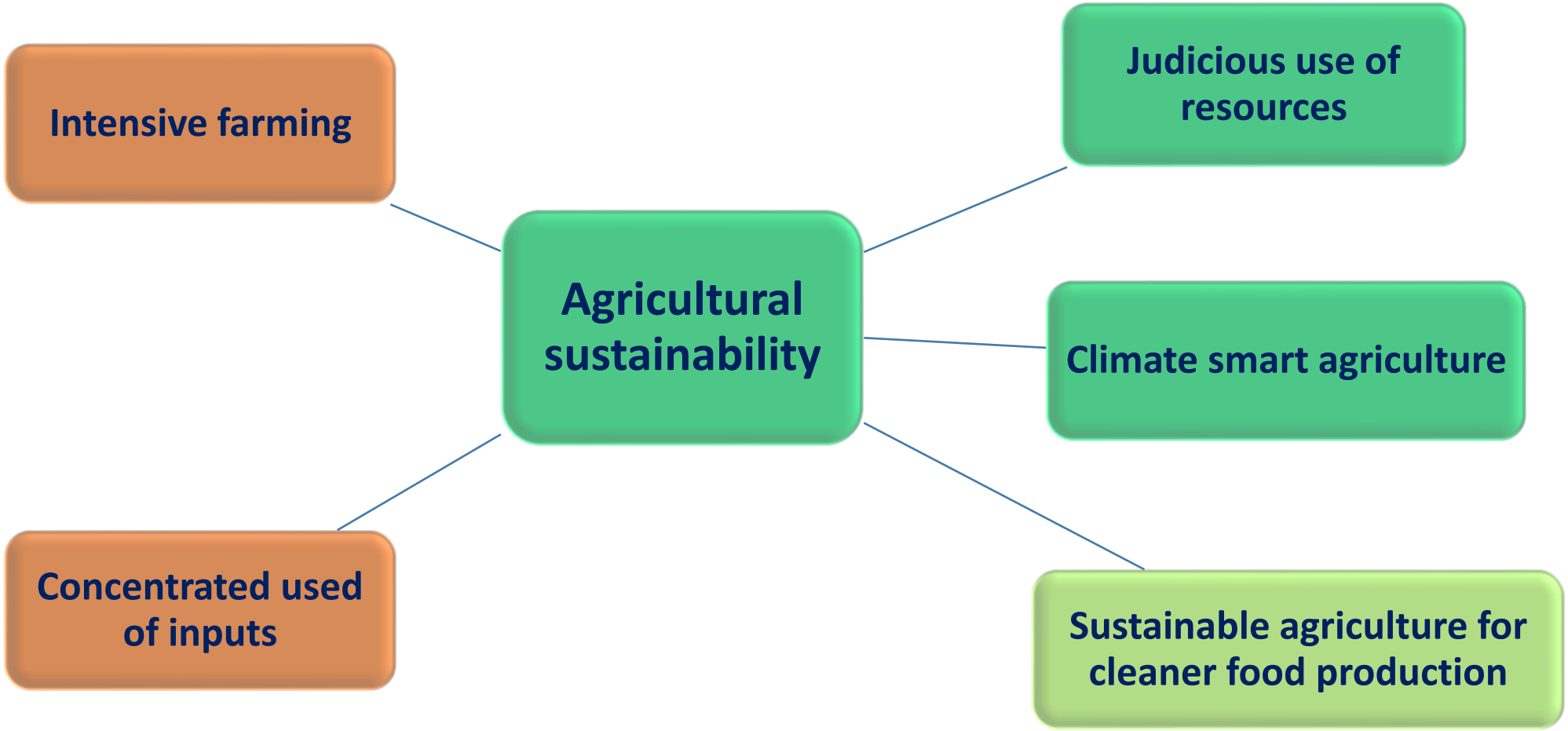
Gaps & shortcomings

Problems	• **Underutilization of resources**, low productivity, poor competitiveness, and wasteful use of natural resources
Problems	• Traditional marketing system is inefficient & costly for smallholders – supply involves **multiple intermediaries resulting long supply chain and low farm gate price** of the produce
Problems	• **Farmers do not get good returns** on their produce due to a lack of awareness, transparent trading practices, and limited bargaining power; commission agents and traders collusion, and poor access to the market
Problems	• This results in apathy and **reluctance for further investment** to improve farming efficiency

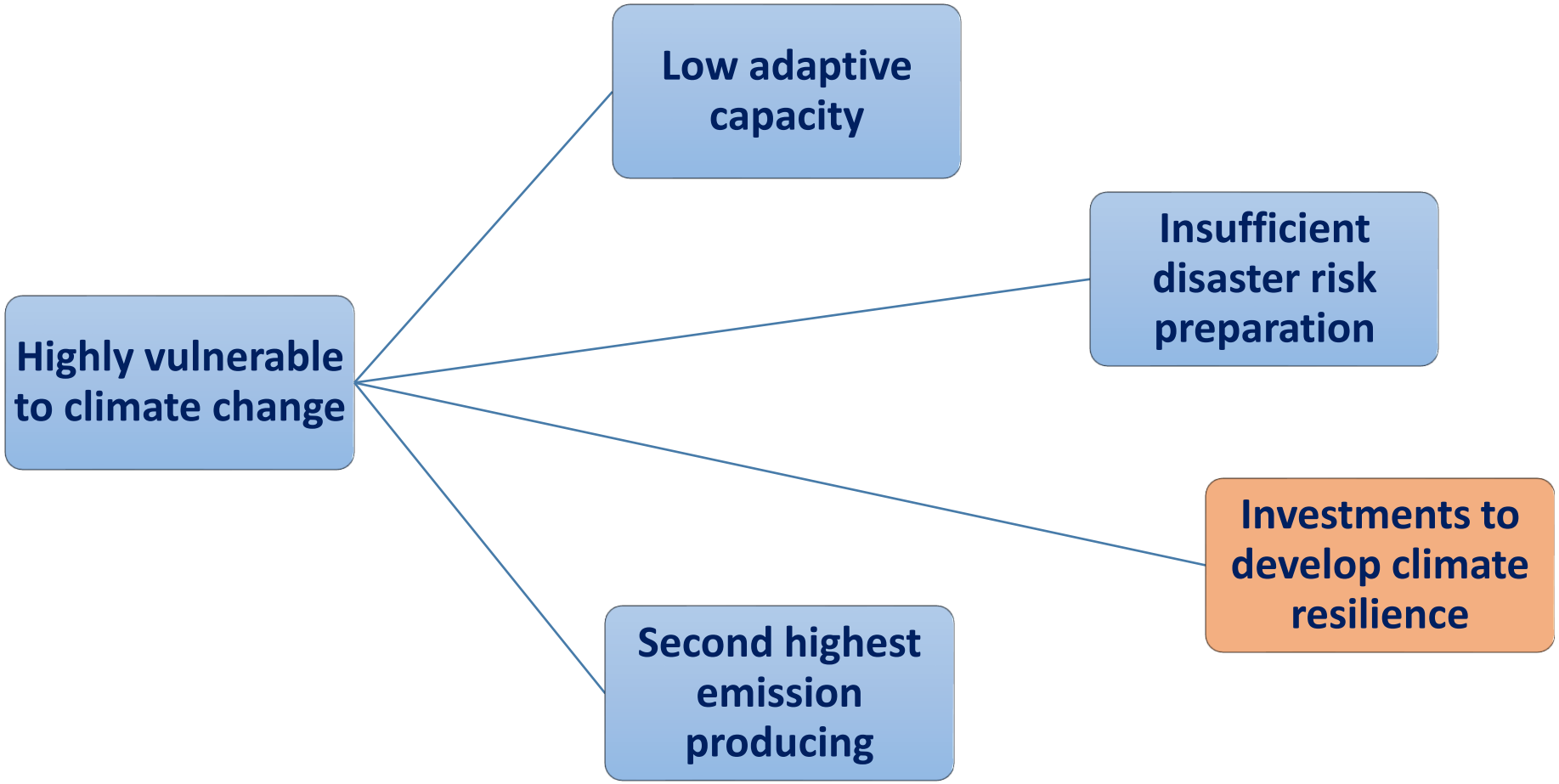
Structural issues

Land inequality	• 1% of the population owns about 22% • while 90% majority have 45% of the total farmland
Infrastructure	• Challenges in upscaling, innovation • Supply chain and value addition issues
Agricultural extension	• Agricultural extension alone could increase farmers' climate adaptation uptake by 23%

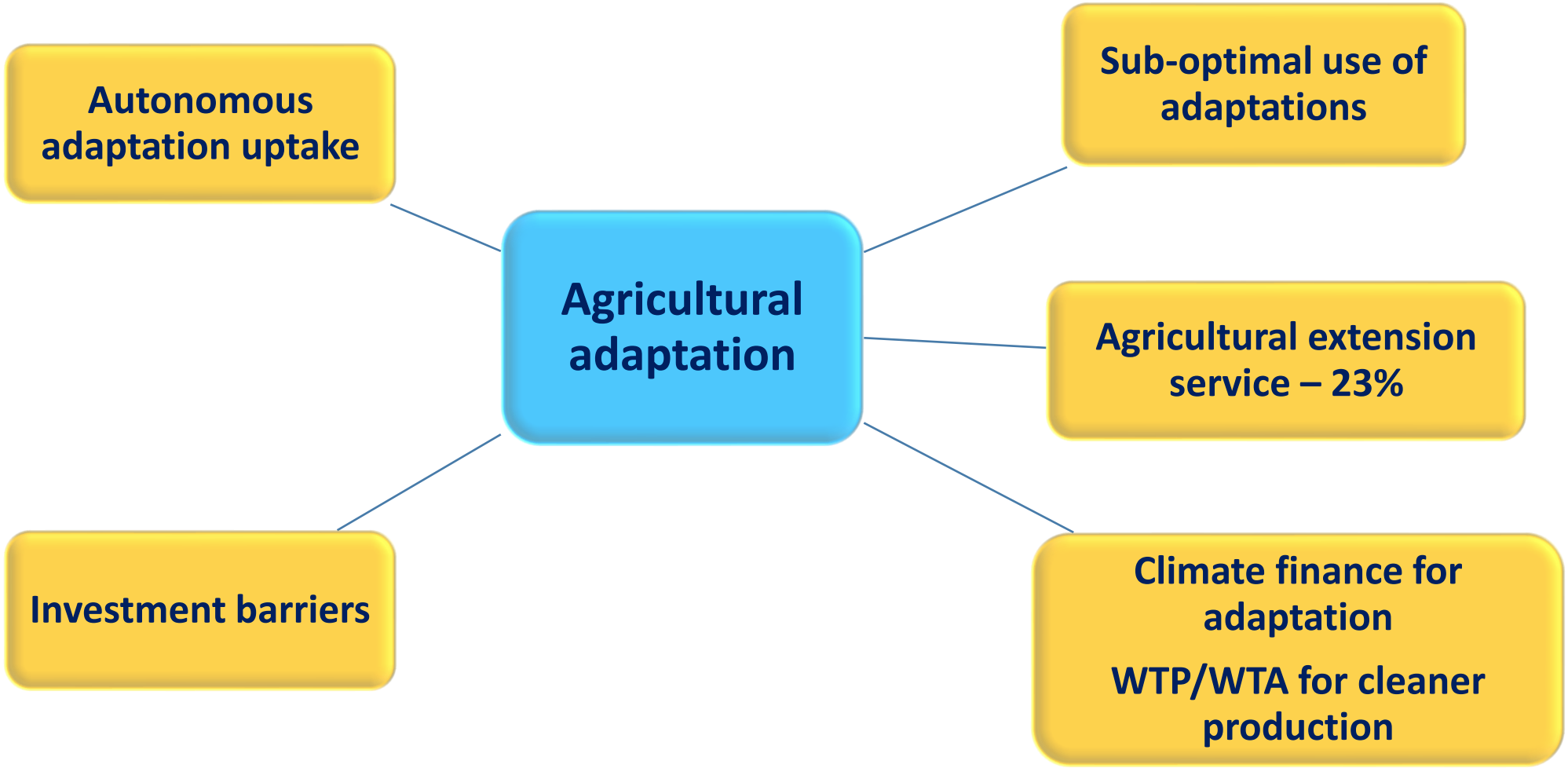
Greening of agriculture: environment & CC



Greening of agriculture: environment & CC



Greening of agriculture: research findings



Global policy initiatives – CBAM

World's first carbon tariff regulation

under the Green Deal

Package of legislation to impose a penalty on energy-intensive production processes

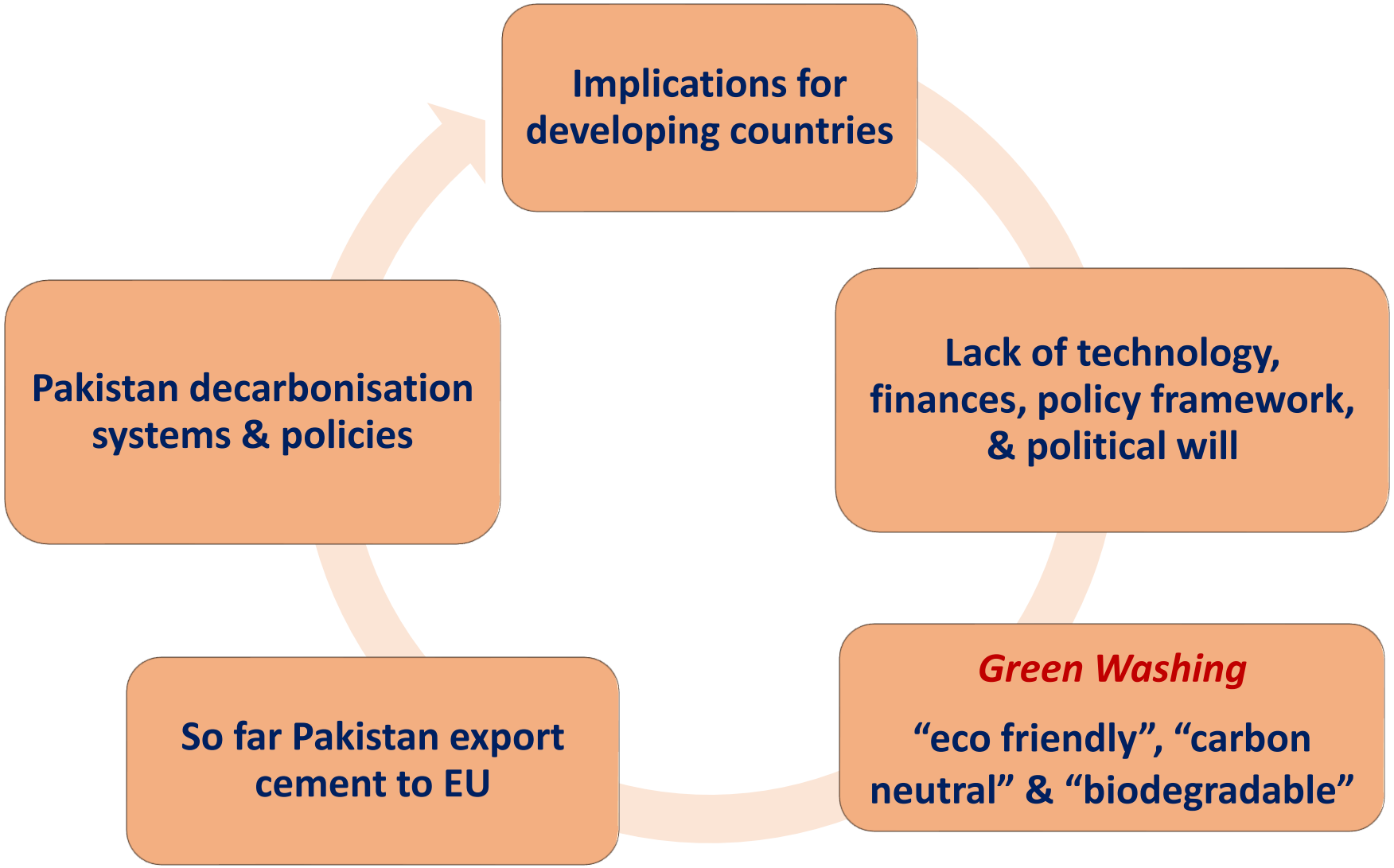
Tool to put a fair price on carbon emitted in the production of carbon-intensive goods

Decarbonise the EU economy to contribute to the global fight against CC

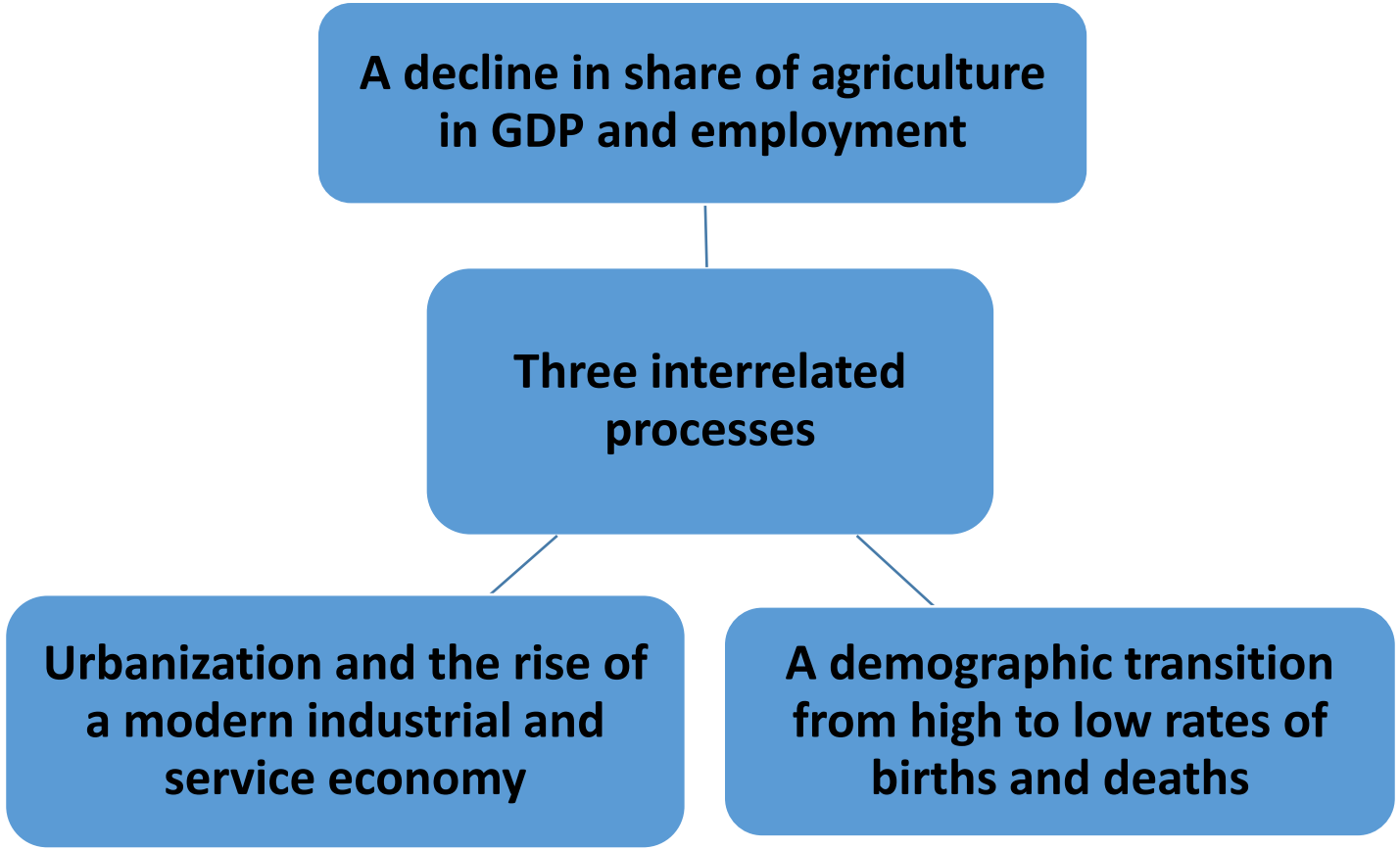
Make Europe the world's first climate-neutral continent by 2050

Cleaner industrial production in non-EU countries to curb GHG emission

Global policy initiatives – CBAM



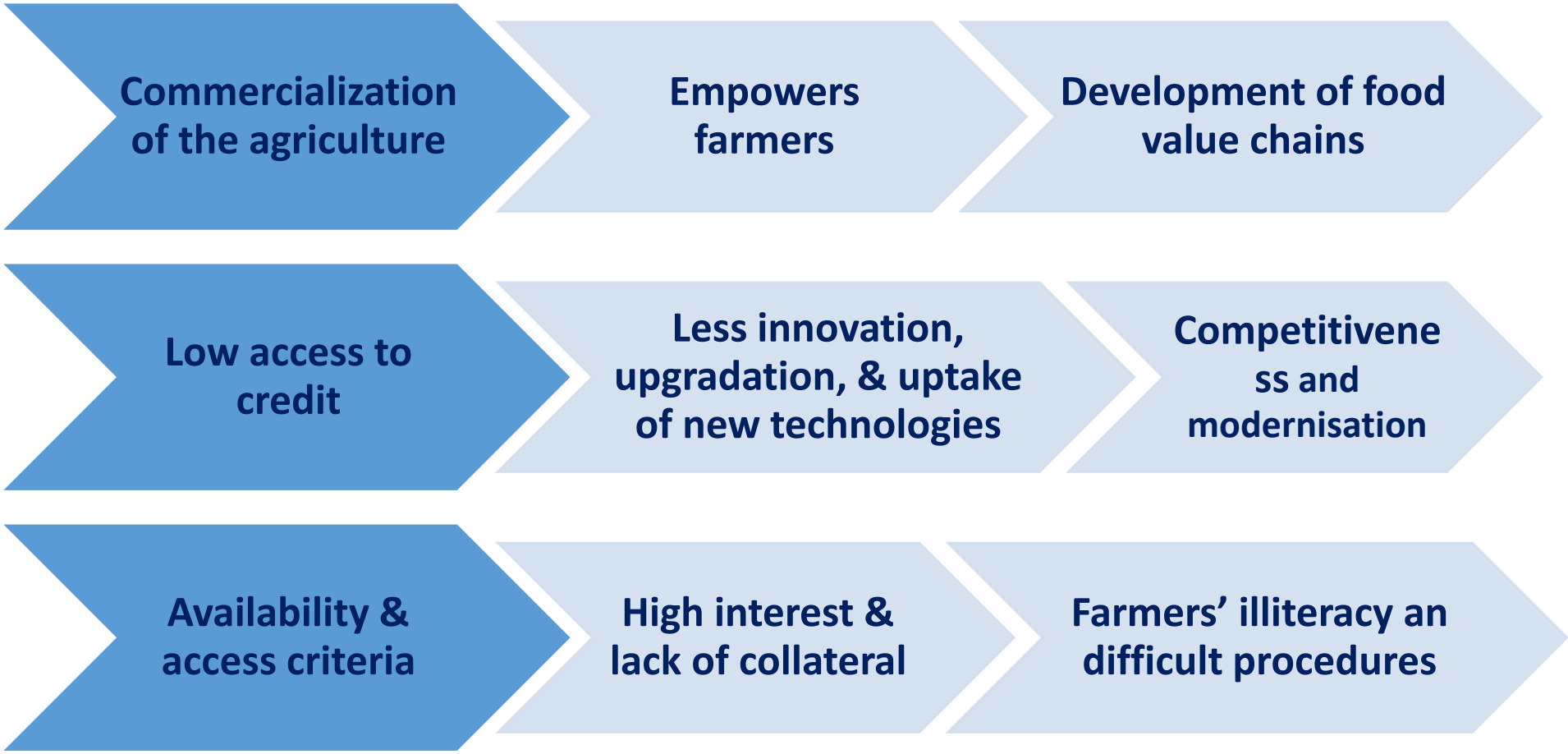
Structural transformation



Structural transformation

- Lewis (1954) – agriculture and economic growth provide the non-agricultural sector with labor and capital freed up by higher productivity in the agricultural sector
- Johnston and Mellor (1961) – market-mediated, input-output interactions between the two sectors so that agriculture can contribute to economic development.
- These linkages are based on the agricultural sector supplying raw materials to industry, food for industrial workers, markets for industrial output, and the exports to earn foreign exchange needed to import capital goods

Agricultural financing



Recommendations

- There is a need to improve the efficiency of small-scale farms
- Farm-to-market linkages, making it more competitive and export-oriented
- Improve the capacity of agricultural extension
- Modern, efficient, and competitive industry which meets the needs of the present
- Productivity of livestock and fish farming – Greater demand for fish, dairy, and meat products in the near future
- Smallholder commercialization to strengthen local businesses and value chains
- Investment remained insufficient, e.g. collection centers for agricultural produce to facilitate aggregation for growers and thereby the sale of fresh produce in bigger quantities.
- In addition to ease of transportation, sorting and grading agricultural commodities with respect to quality to attract buyers who want larger volumes.
- Mitigate opportunistic behaviour and encourage more consistent sales relationships between registered producers and farmers to sell to known trading partners.

Recommendations

- Use of efficient irrigation for conservation and efficient use of scarce water resources
- Use of renewable energy energy-related GHG emissions – **over-exploitation**
- Short duration crops and crop mix with livestock and non-food crops
- Use of flood and drought resilient crop verities
- Adoption of agroforestry for crop diversification and climate resilience
- Food certification schemes could be very helpful in GHG emission reduction and sustainable farming
- Comprehensive credit scheme covering the entire agricultural value chain, from input suppliers to producers, processors, and distributors
- Partnerships between financial institutions, agribusinesses, and cooperatives to provide integrated financial services
- Optimal use of digital technology and mobile banking to reach farmers in remote area
- Disguised employment due to a lack of agricultural mechanisation as many tasks are still performed manually
- Impedes effective demand and generation of agricultural surplus and its realisation into purchasing power for industrial