

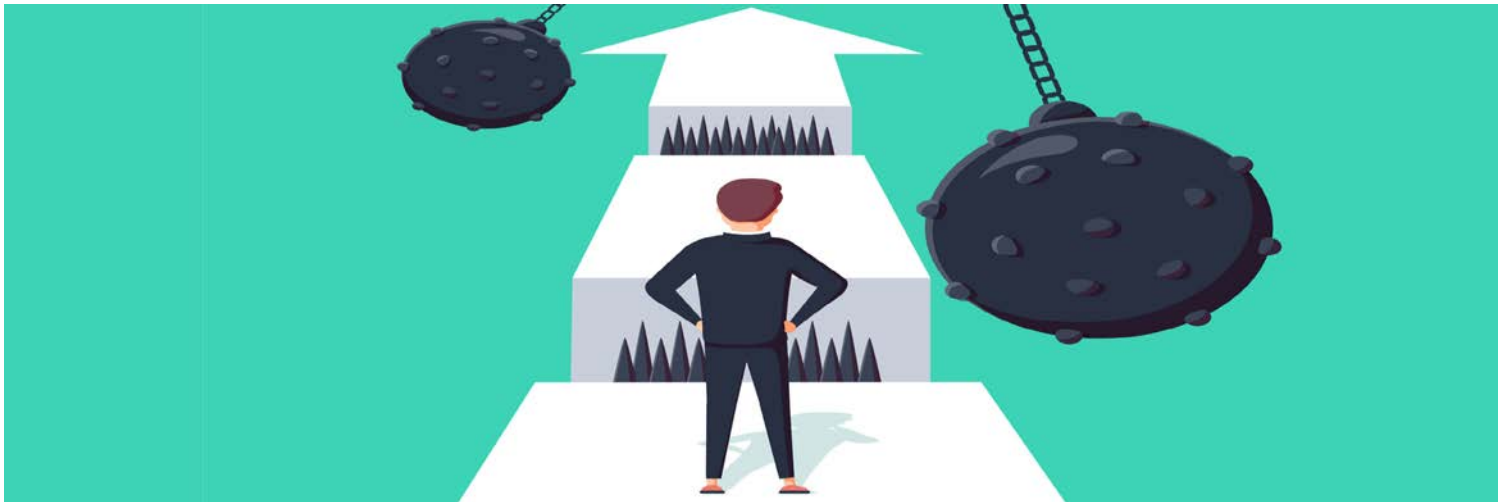


Challenges of the agricultural systems in Egypt

Prof. Dr. Osama Ahmed

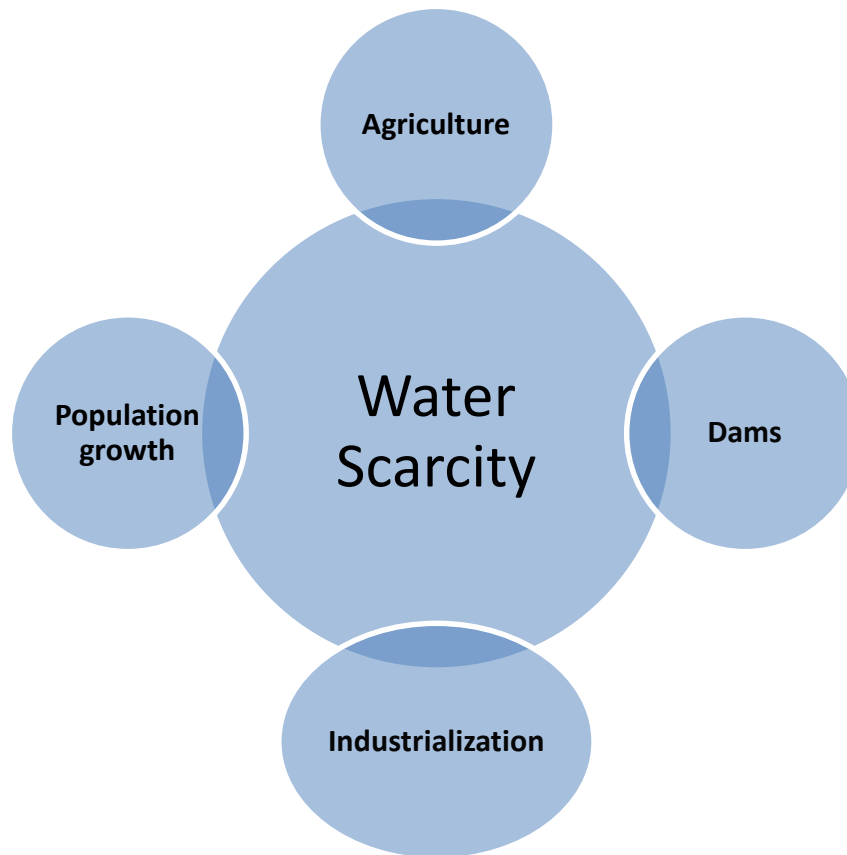
- **Research Associate** at the Leibniz-Institute of Agricultural Development in Transition Economies (IAMO) and **Associate professor** at Cairo University
- **TRUSTFARM project coordinator** – "Towards Resilient and sUStainable integrated agro-ecosystems Through appropriate climate-smart FARMing practices"

Agriculture sector in Egypt facing several challenges





Water Scarcity





Climate Change



Changes in temperature



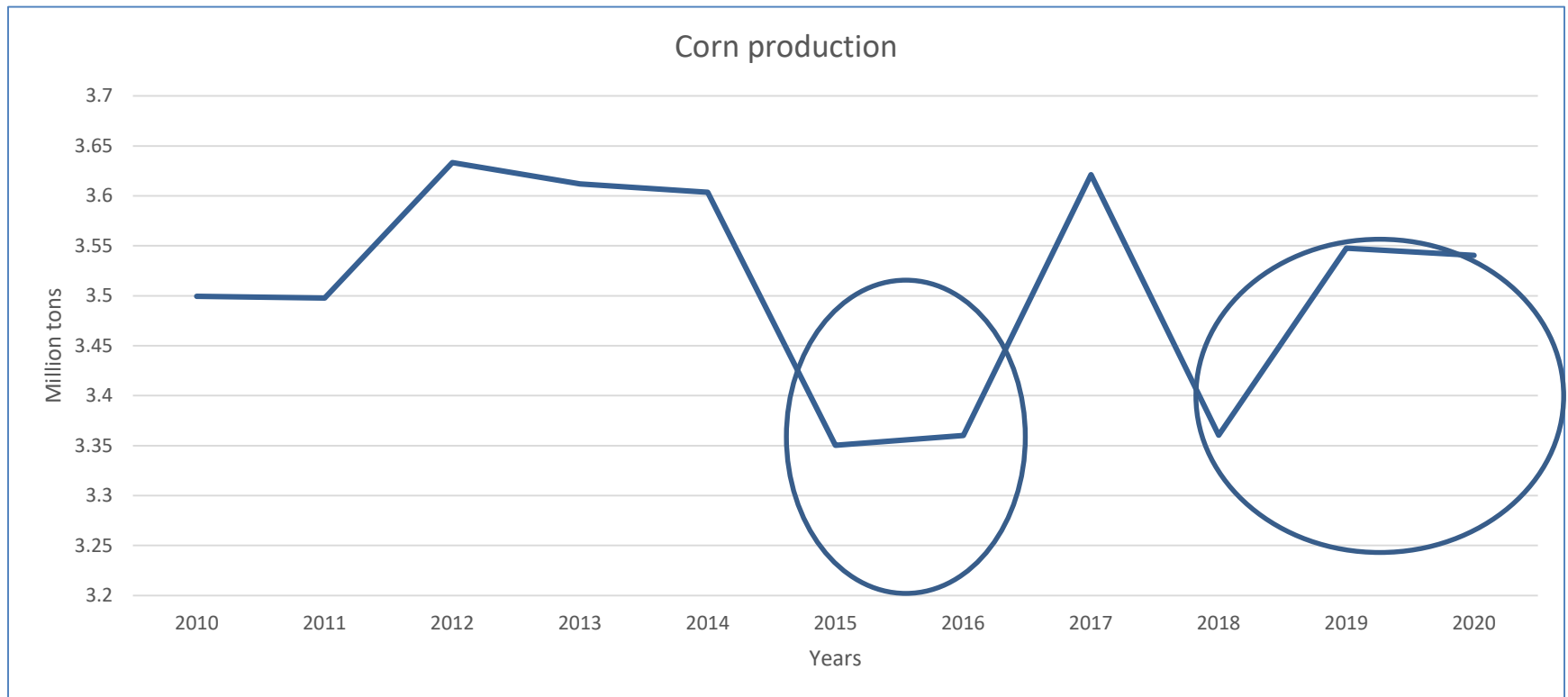
Changes in precipitation patterns



Increased frequency of extreme weather events



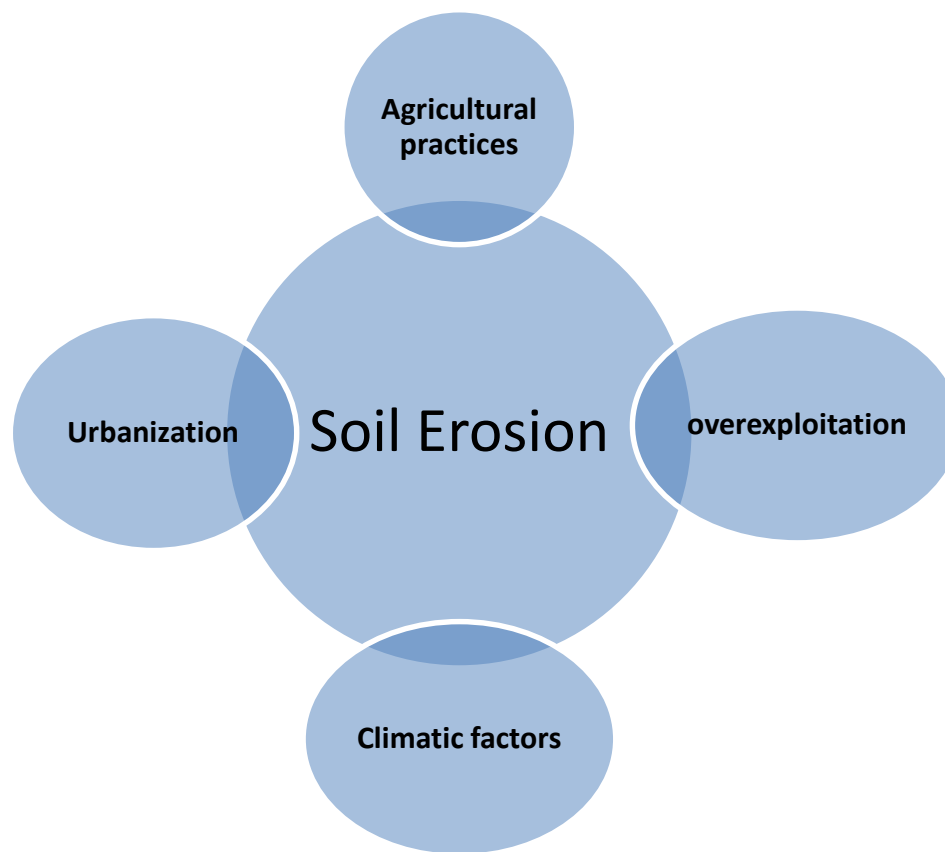
Climate Change



Source: CAPMAS, 2022

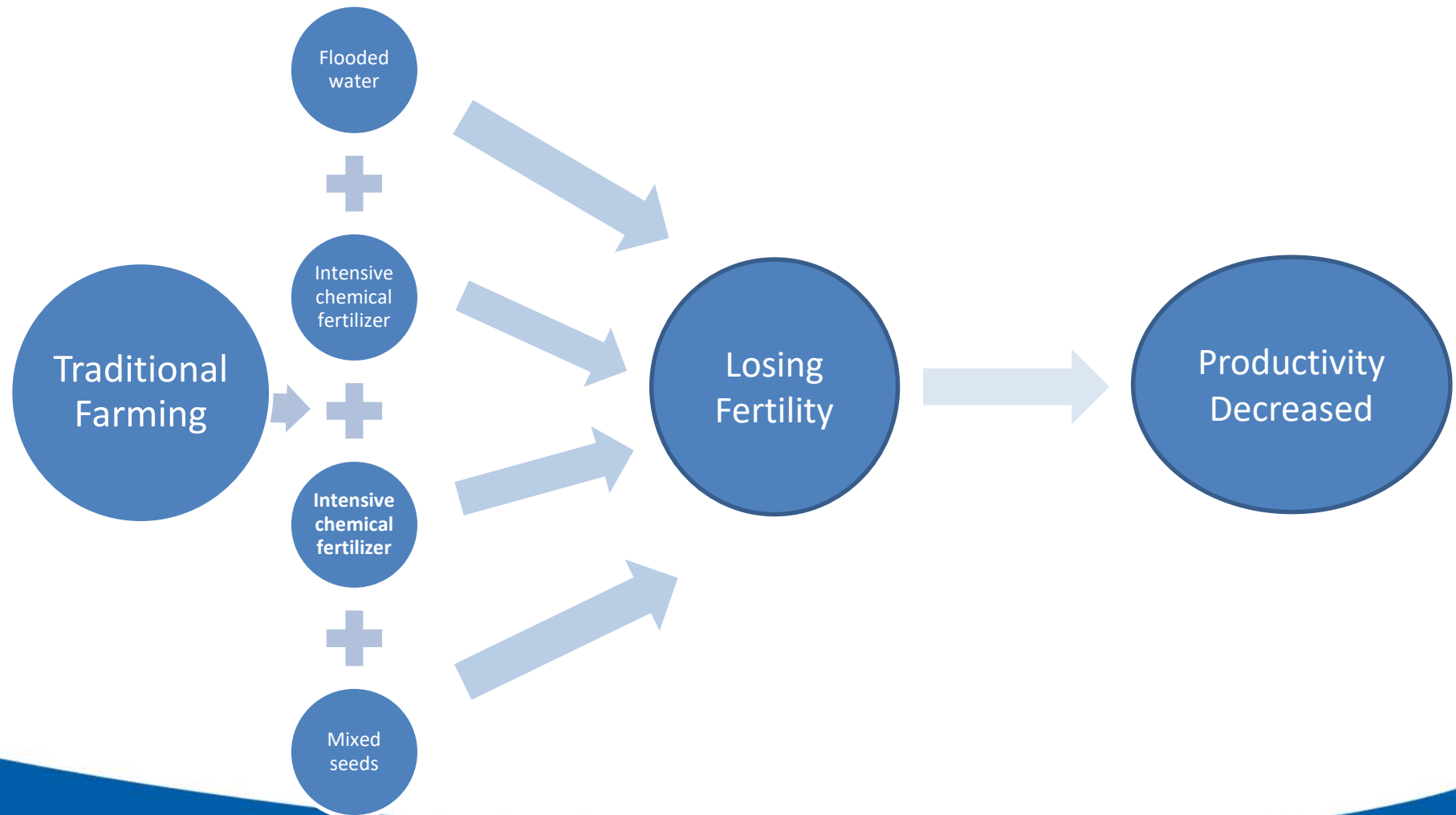


Land Degradation



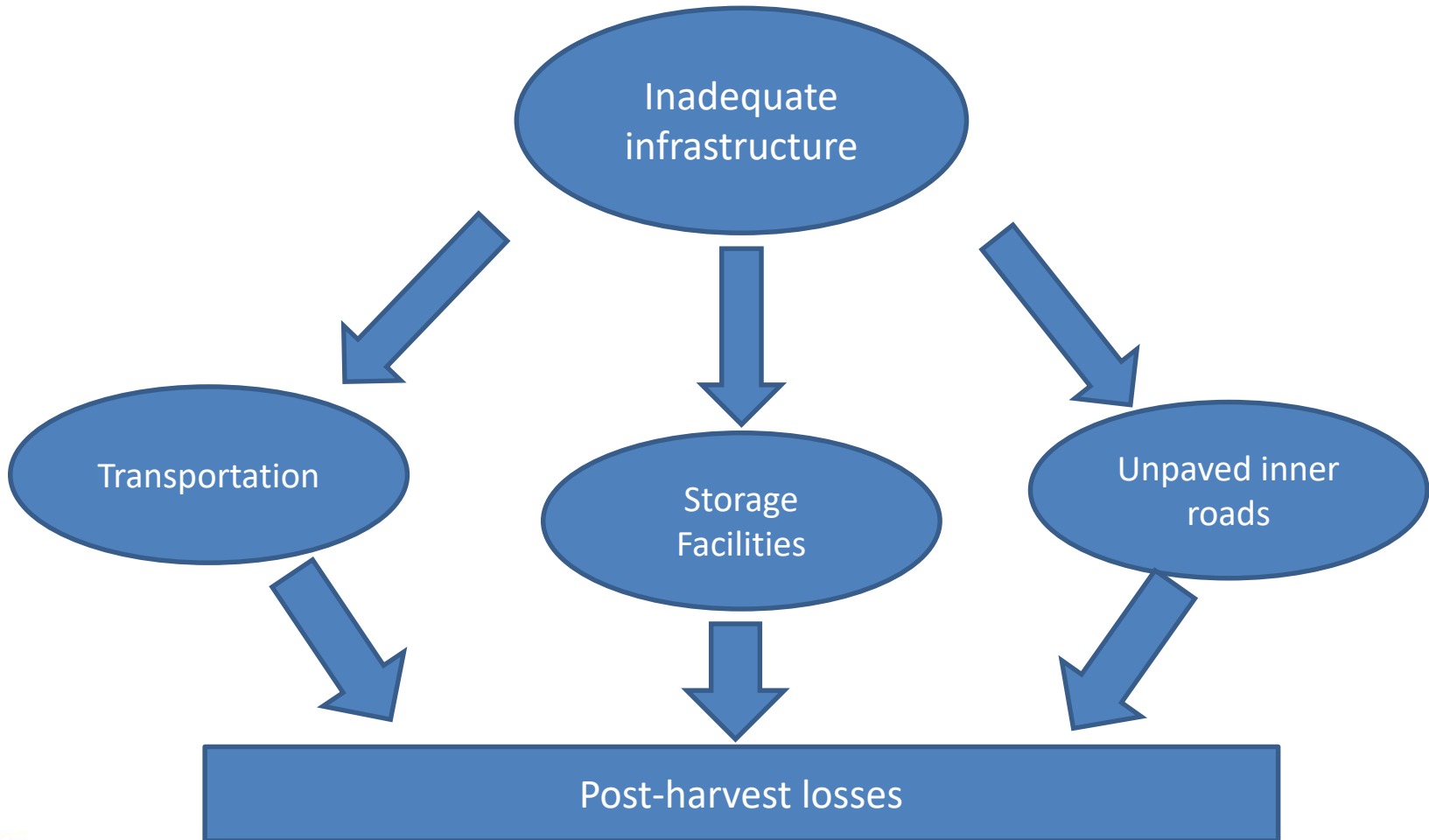


Traditional Farming Practices



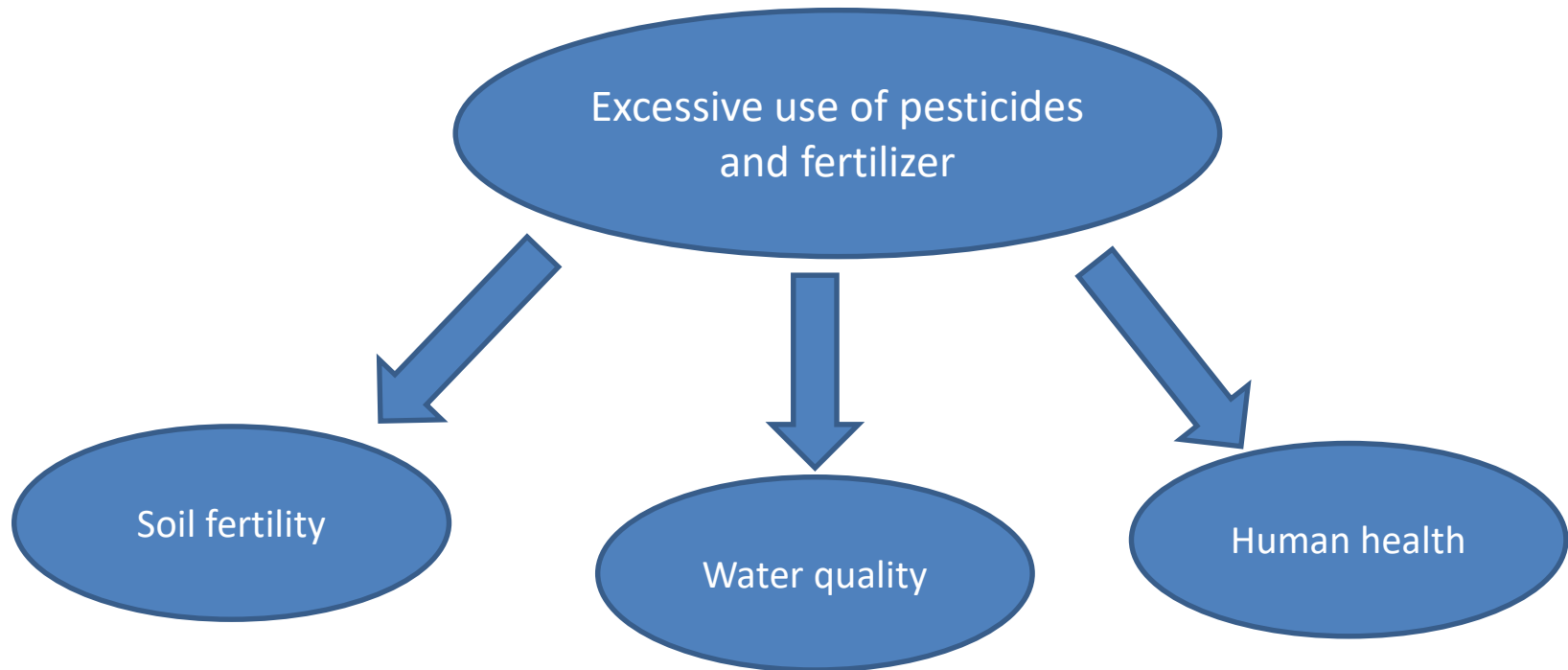


Lack of Infrastructure



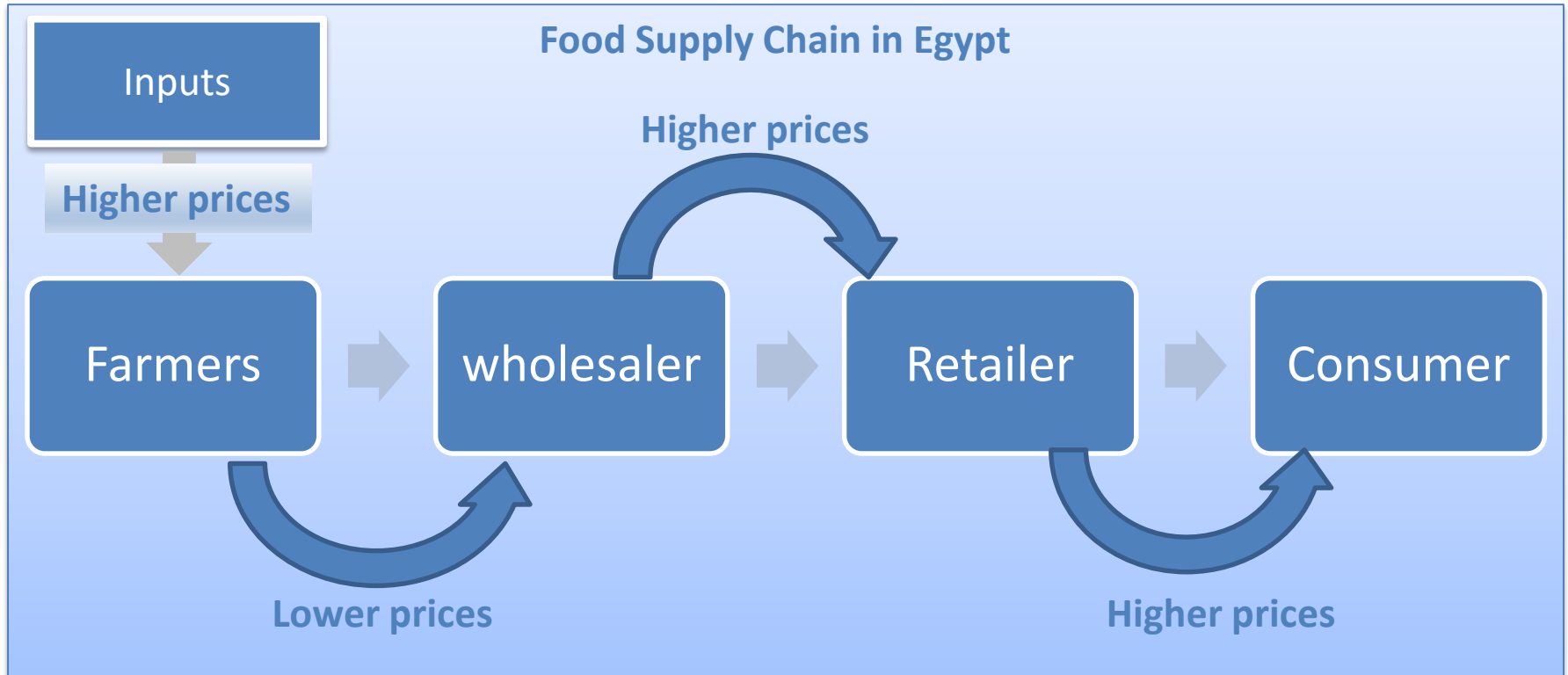


Pesticide and Chemical Use





Market Access





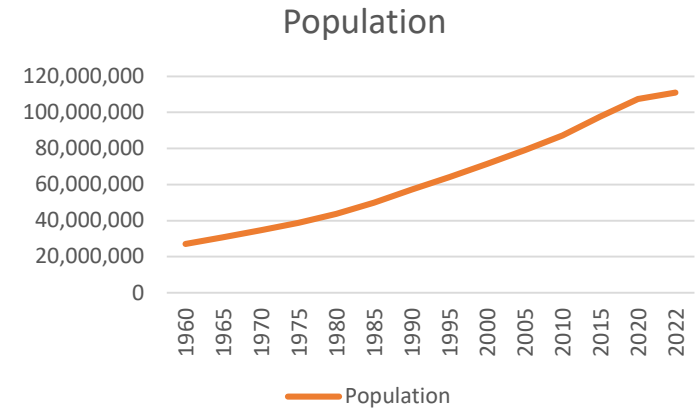
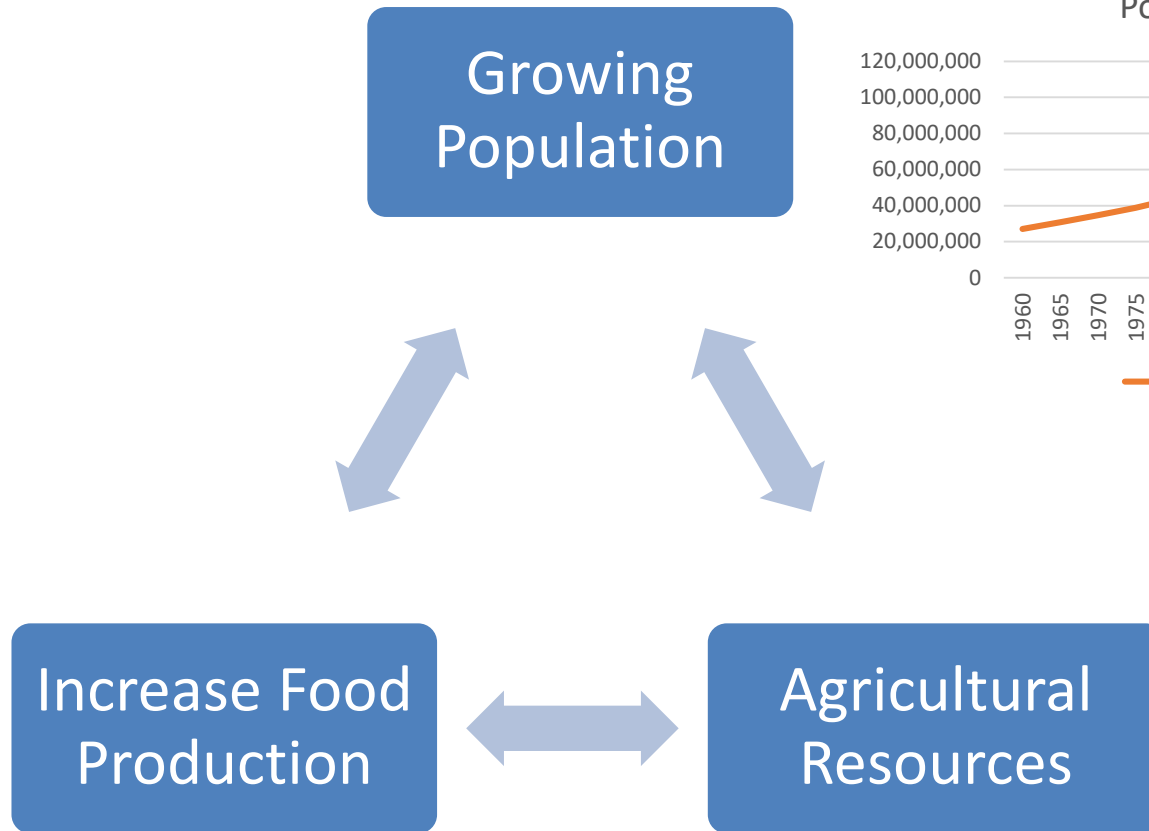
Extension Service

Extension service is constrained by several issues and problems:

- 1. Not enough qualified extensionists**
- 2. Lack of transport facilities**
- 3. Low financial support**
- 4. Poor and uncomfortable working conditions**

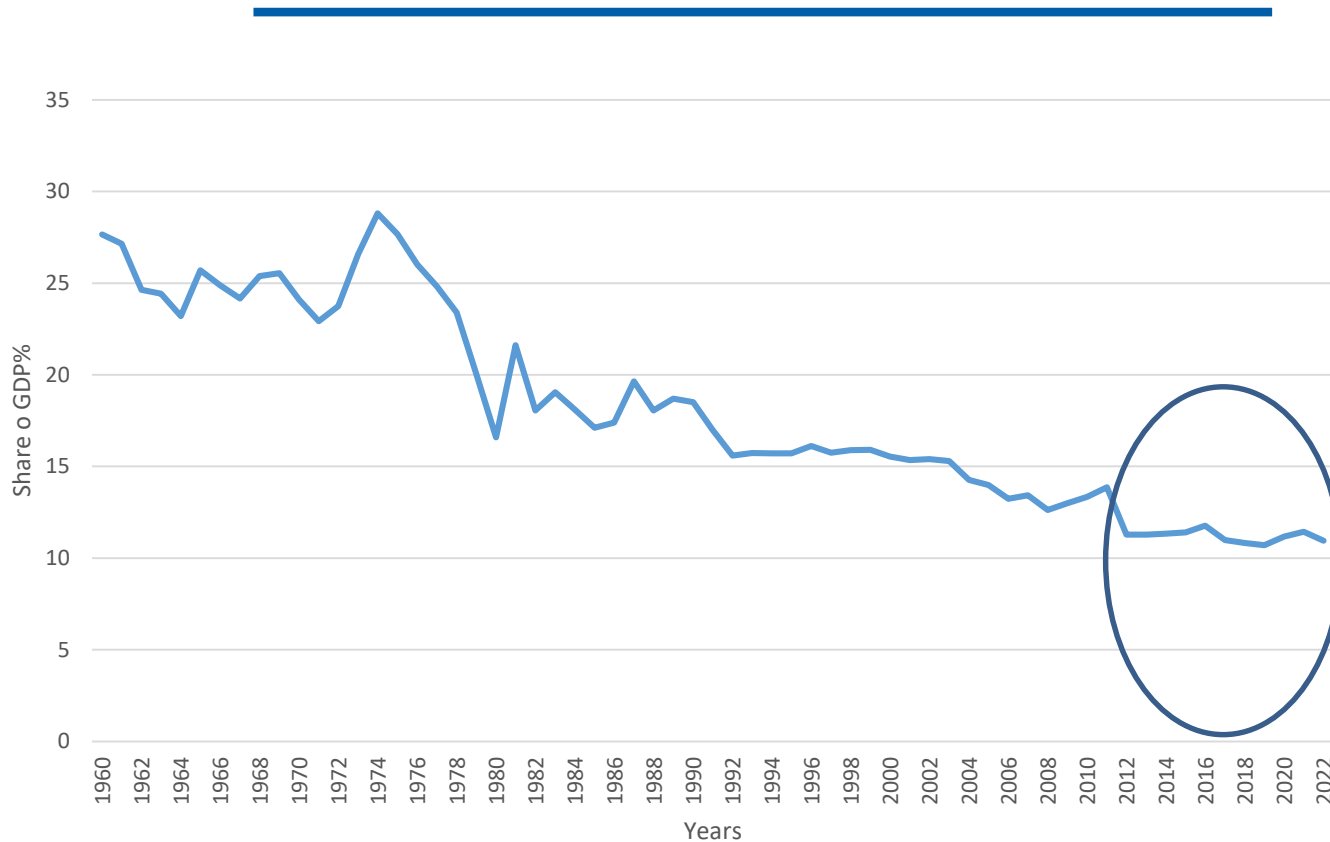


Population Pressure





Contribution share of the agriculture sector to GDP

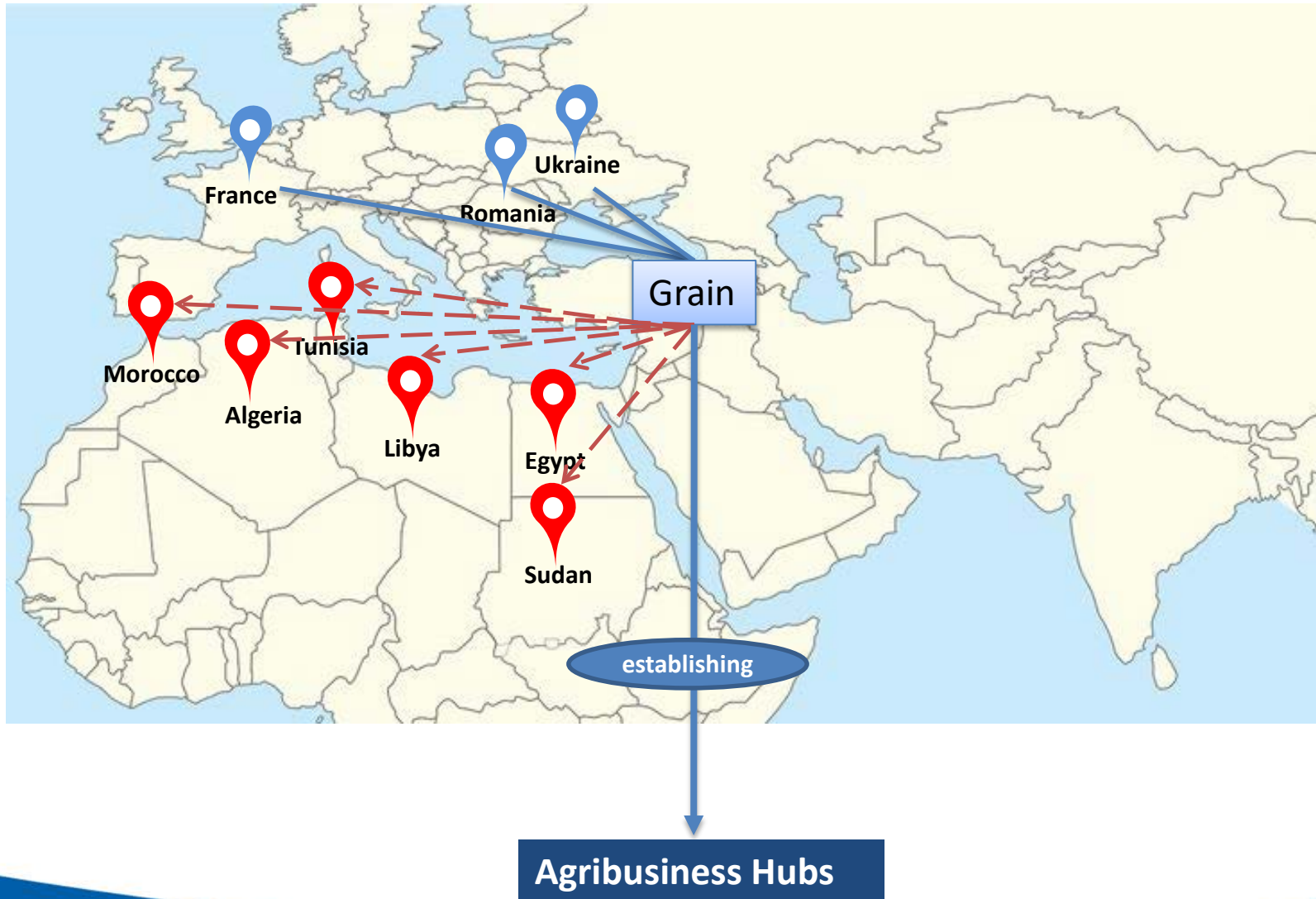


Source: World bank, 2023



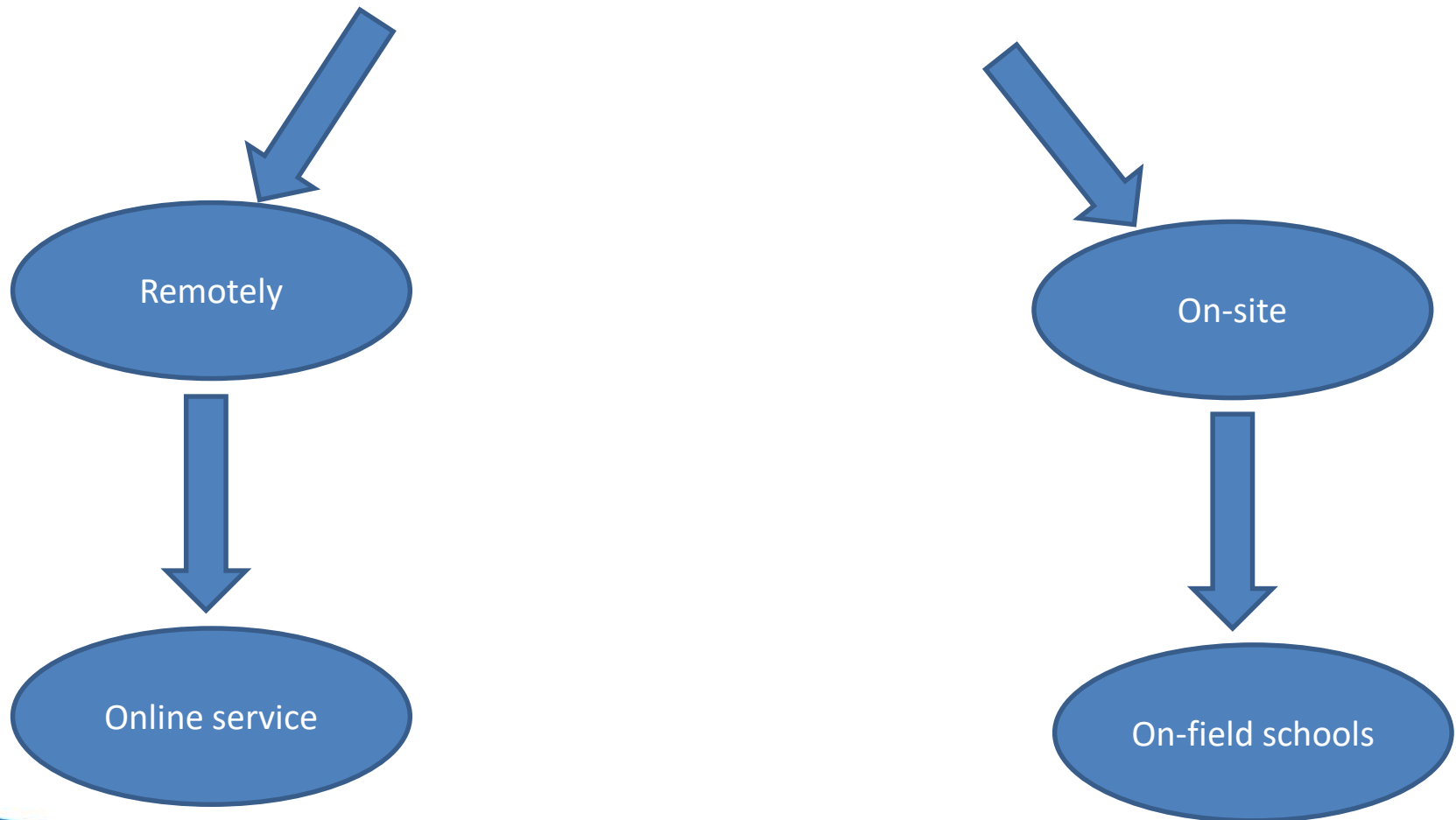
Potential Collaboration







Agribusiness Hubs



TRUSTFARM Activities & Key Findings





Cairo University

Egyptian case study



Activity



- This study was carried out at El-Nubaria and El Behera governorates in North Egypt.
- Three commercial corn and wheat hybrids were used to be tested.
- They were developed by Agricultural Research Center (ARC), Egypt (1 hybrid) and private national and international companies working in Egypt, namely Corteva Co. (2 hybrids).
- Using 25% of the vermicompost instead of chemical fertilizer.





Cairo University



Egyptian case study



Key findings (preliminary)



- To reduce the impact of climatic changes, the number of plants per hectare was increased, the use of nitrogen fertilizers reduced, and the use of organic (compost) and bio-fertilizers.
- Best irrigation strategies for sustainable agronomic management combined with drought tolerant grain varieties reduced water consumption by 20-25 % and increased production in average from 15-20 %.
- Implementation of the circular economy model by reusing vegetative and animal waste to produce compost shows a 25% reduction of chemical fertilizer



END



Thank you All

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