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# Welcome...





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# **AKIS AND AIS**

**Extension Landscaping (EXTN0501)**



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# INTRODUCTION

**Now-a-days a new and better ways to share knowledge and expertise are essential to keep agriculture and food production competitive and rural areas vibrant. Knowledge and innovation plays an important role in helping farmers and rural communities along with extensionist to meet current and future challenges. To make sure that people are connected and knowledge is shared AKIS is helpful. Everyone who produces and uses knowledge is part of AKIS.**



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# WHAT IS AKIS?

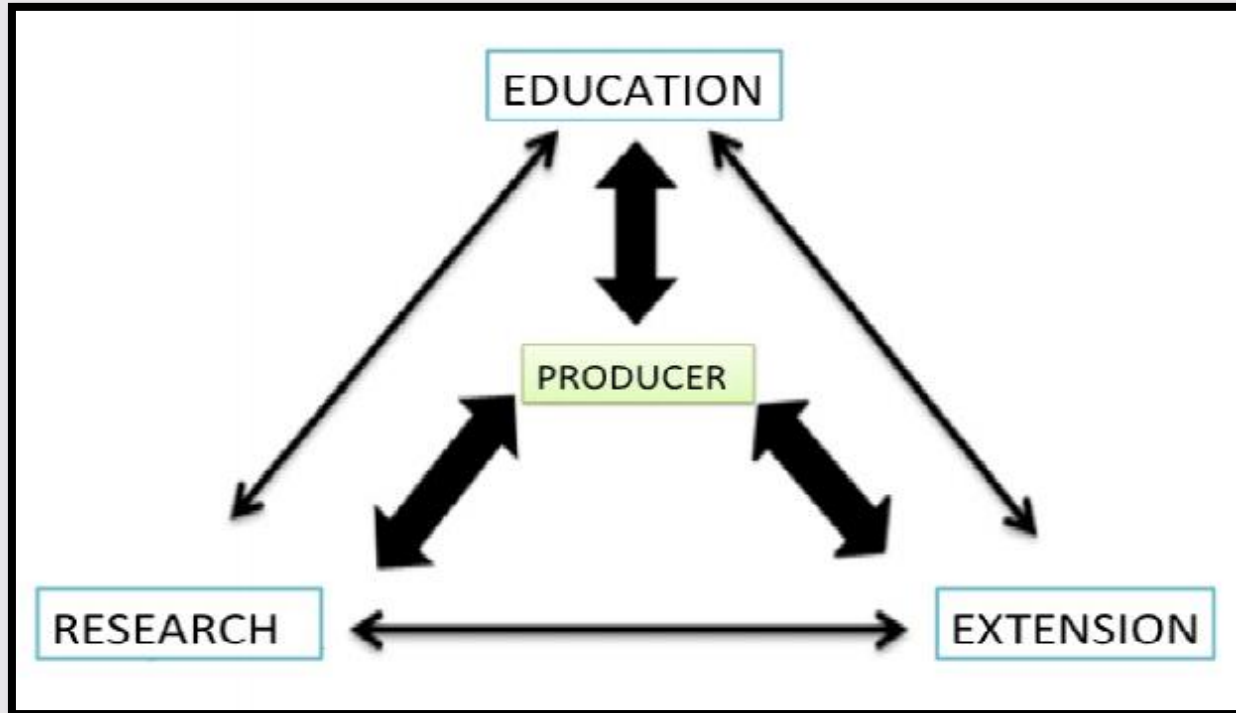
## **AKIS : Agriculture Knowledge and Information System**

- ❑ **DEFINITION:** AKIS links people and institutions to promote mutual learning and generate share and utilize agriculture- related technology, knowledge and information.
- These are designed to collect, process, and disseminate information related to agriculture and rural development
- These systems typically involve a variety of stakeholders, including farmers, extension workers, researchers, policymakers, and other members of the agriculture community.
- It respond to technology, knowledge and information needs of farmers helping them in decision making and management of their problems.



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# KNOWLEDGE TRIANGLE





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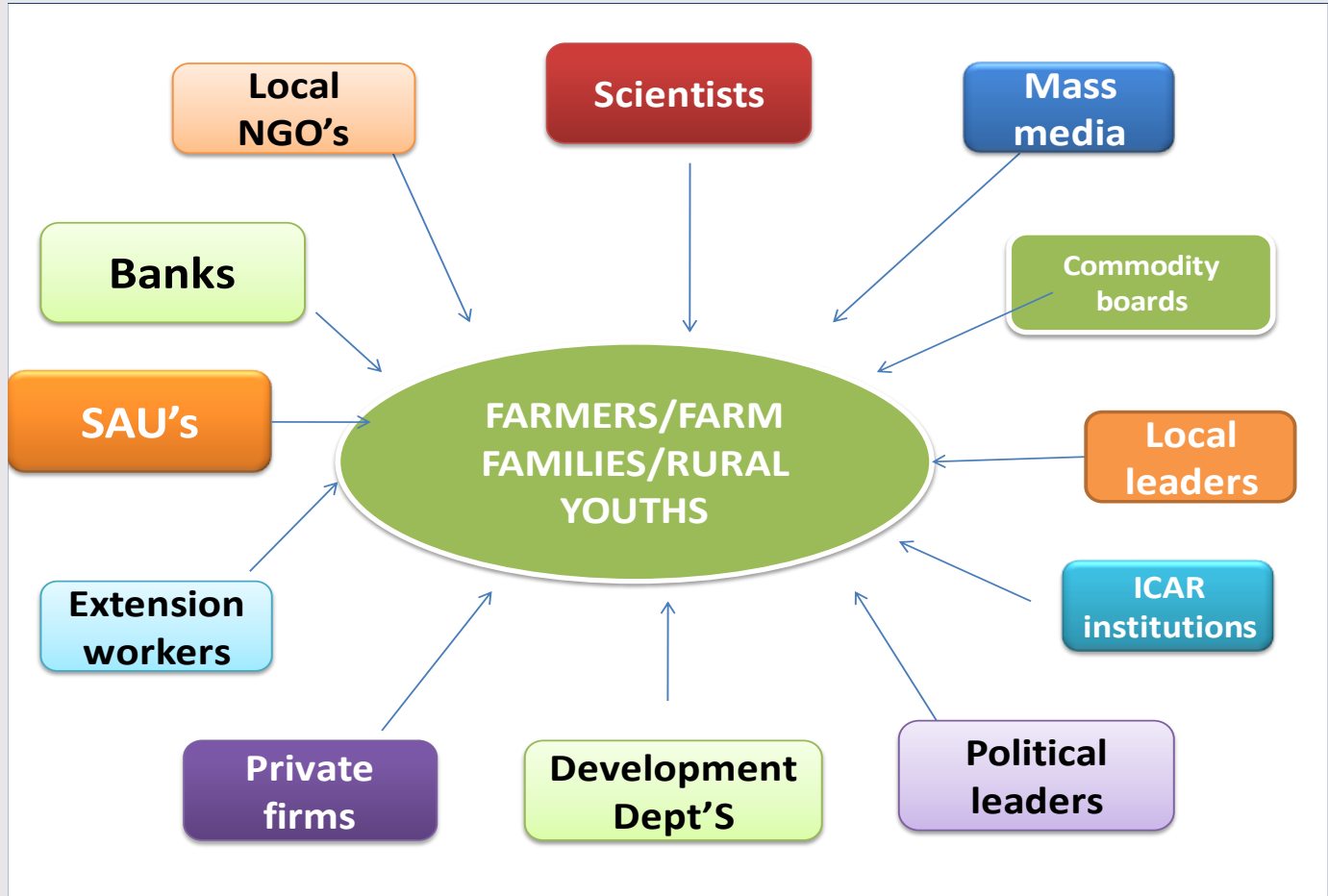
# CONCEPT OF AKIS

- **AKIS addresses** a wide range of **issues**, including **food security**, **rural poverty**, **environment sustainability**, sustainable management of natural resources.
- It can take many forms like extension services, research institutions, farmer organizations where the flow of knowledge and innovation can facilitate.
- It can be **supported** by **different ICT tools** like radio, television, mobile phone etc.
- **AKIS** respond to technology, knowledge and information needs of farmers helping them in decision making and manage their farms.



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## STRENGTH OF AKIS

1. Improved access to information
2. Enhanced collaboration and networking
3. Improved decision making
4. Increased efficiency
5. Enhanced sustainability



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## LIMITATIONS OF AKIS

1. Limited access
2. Inequality of access
3. Limited uptake
4. Limited capacity
5. Lack of co-ordination
6. Dependence on external funding



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# INNOVATION SYSTEM

- The term “Innovation system” was first coined by economist **Christopher Freeman** in the 1980s.
- Innovation system are often characterized by actors, linkages, institutions, resources and output.
- It highlights the **importance of fostering collaboration and interaction between different actors and institutions in order to promote innovation** and drive economic and social development.



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# EVOLUTION OF INNOVATION SYSTEM

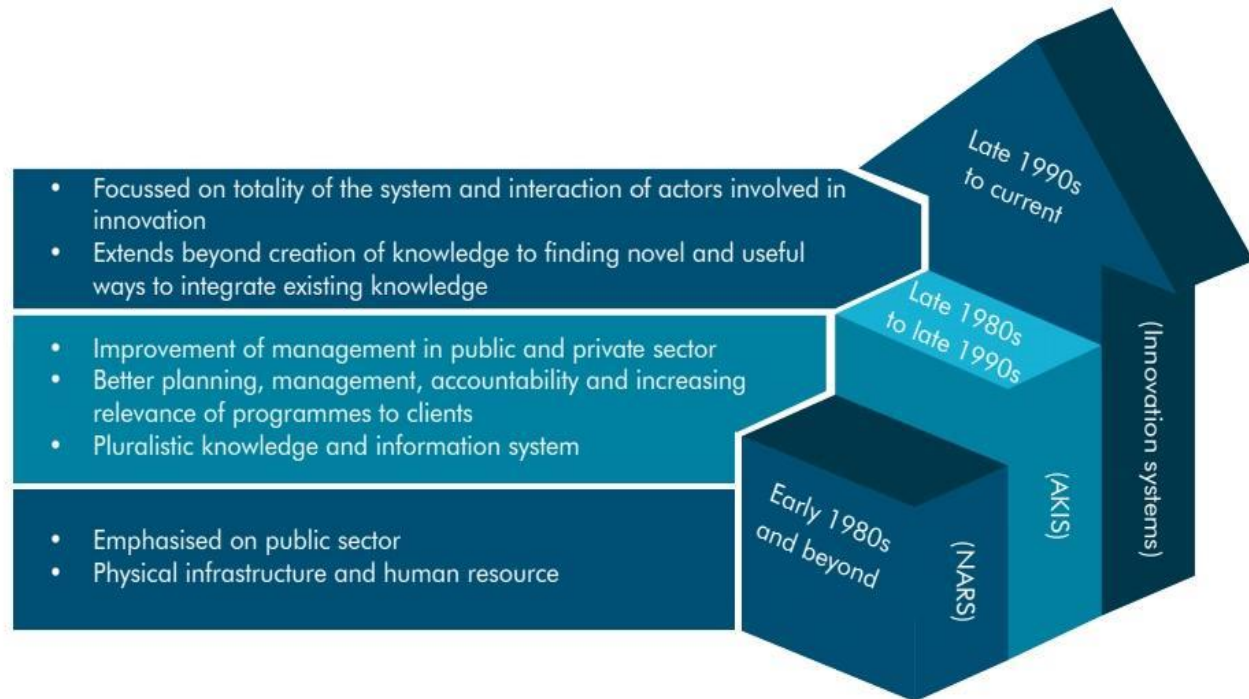


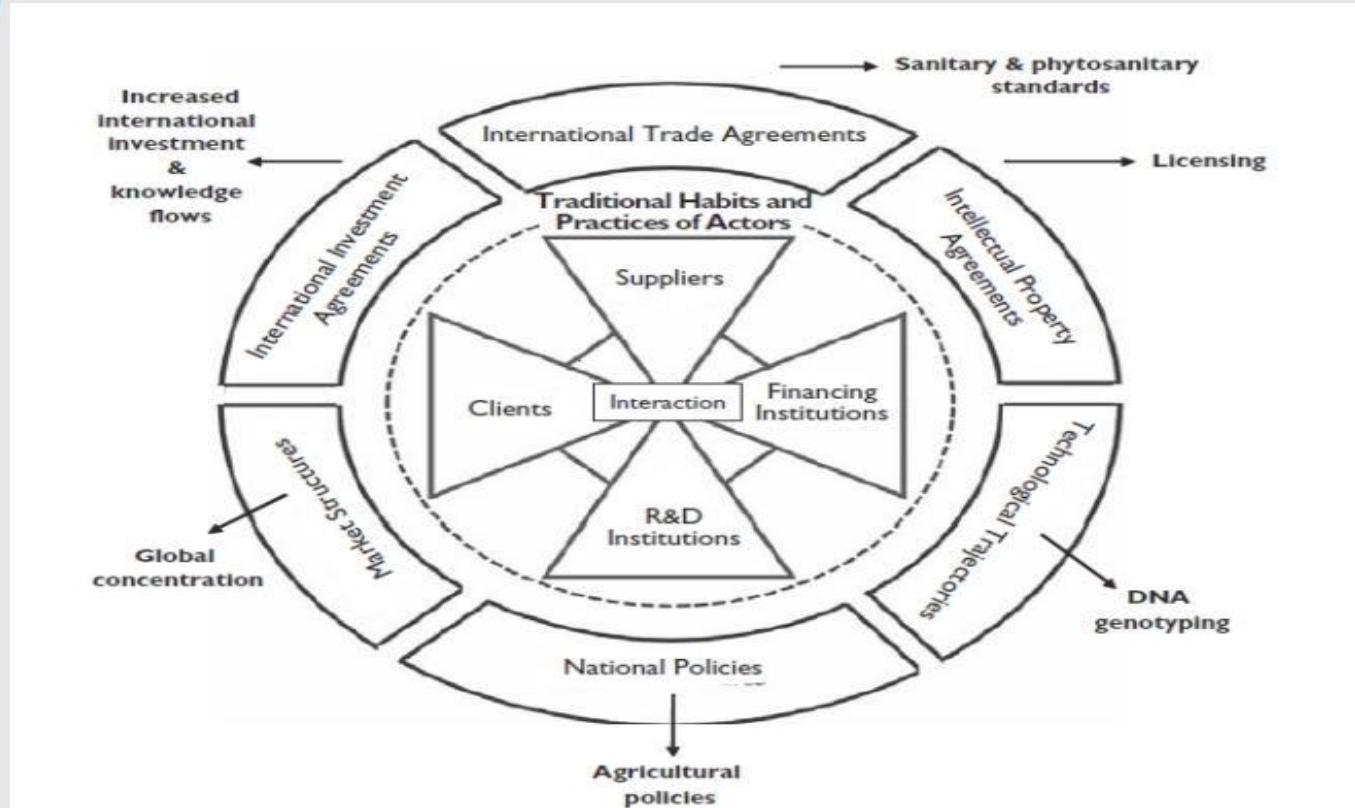
Fig. 1. Evolution of the Innovation Systems concept



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# LOCAL SYSTEMS OF INNOVATION





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# WHAT IS AIS?

## **AIS: Agricultural Innovation System**

**DEFINITION:** An agricultural innovation system is a set of institutions, policies, and networks that support the development and adoption of new ideas, technologies, and practices in the agricultural sector.

Elements of an AIS can include research and development institutions, extension services, education and training programs, private sector companies, farmers and other stakeholders, and policy and regulatory frameworks.

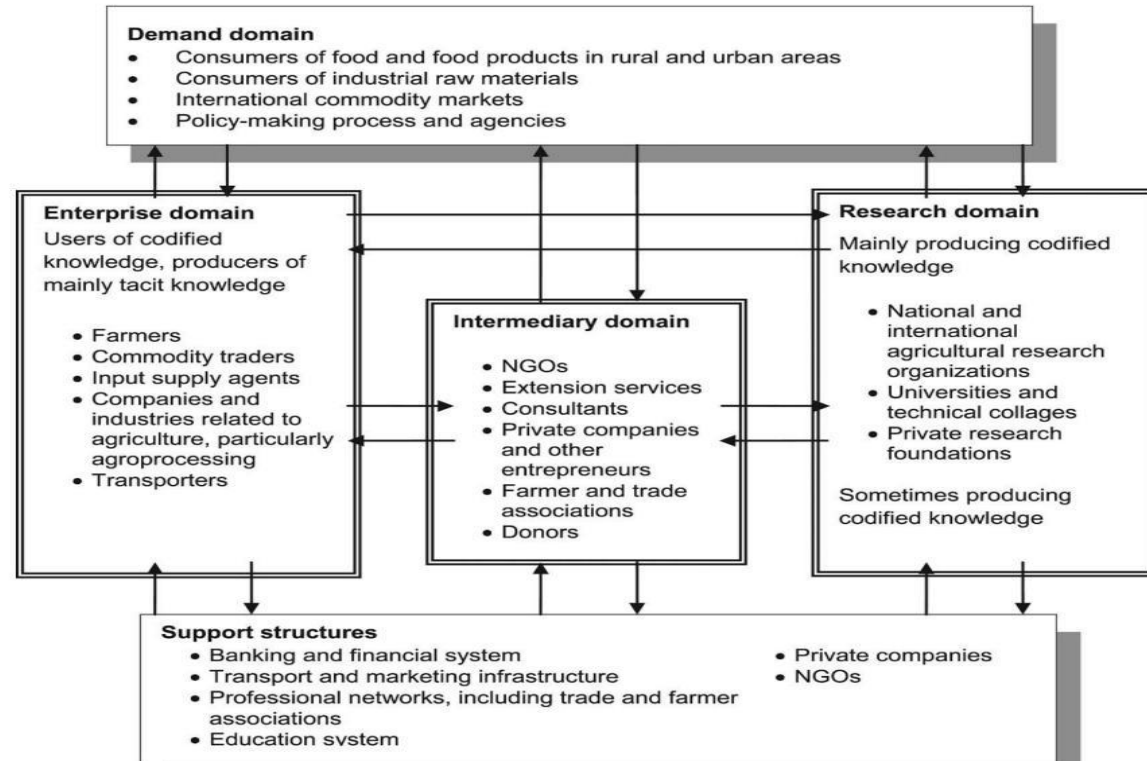


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# ELEMENTS OF AIS

*A dynamic processes of interacting embedded in specific institutional and policy contexts*

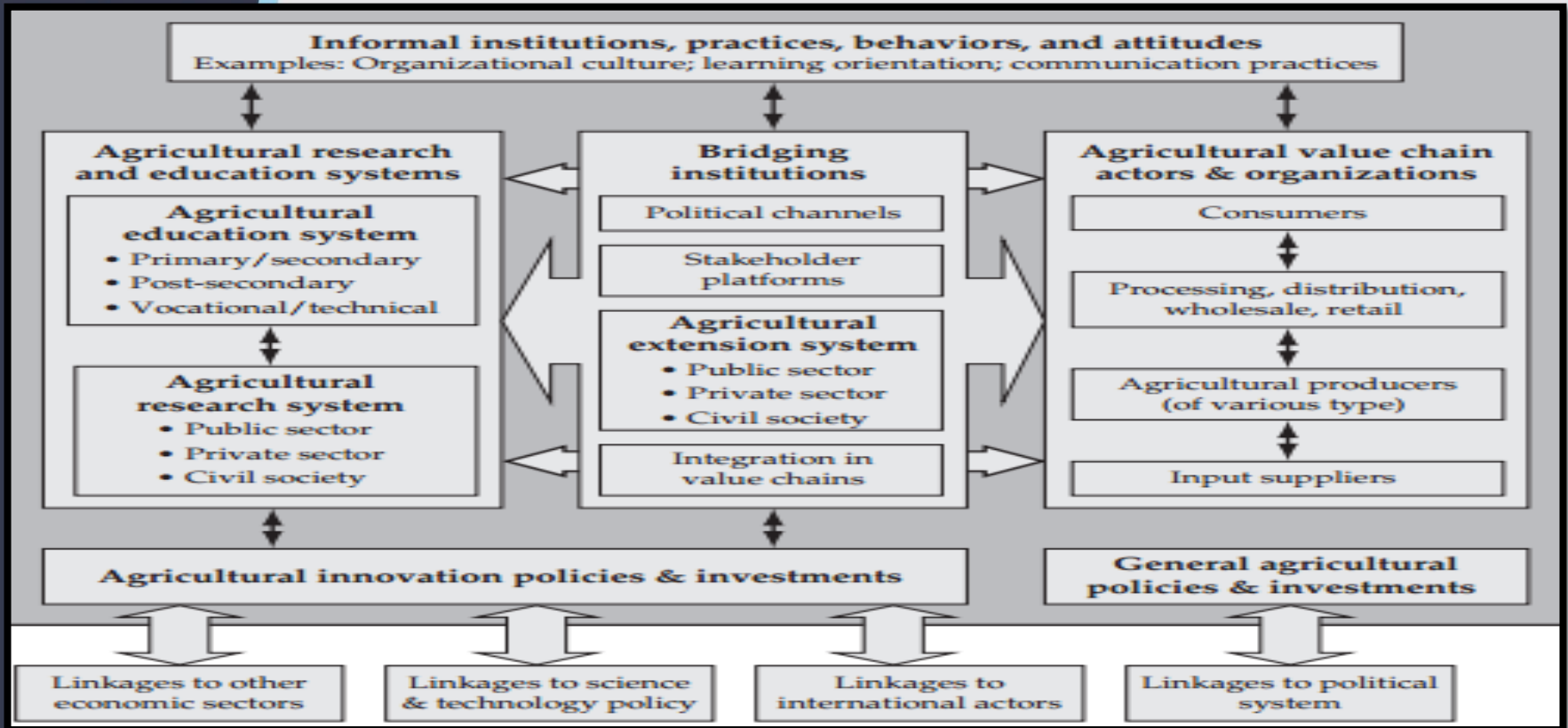




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# FRAMEWORK OF AIS







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# ADVANTAGES OF AIS

1. Improved productivity
2. Adaptation to climate change
3. Increased efficiency
4. Enhanced sustainability
5. Improved food security
6. Economic growth



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## **DISADVANTAGES OF AIS**

1. High costs
2. Limited access
3. Dependency on external resources
4. Complexity
5. Resistance to change
6. Negative impact
7. Limited scope
8. Lack of co-ordination



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## CONCEPT OF REDEFINING INNOVATION

- Redefining innovation is the idea of reassessing or revising the way of that innovation is understood or approached.
- Redefining innovation can involve a variety of actions, such as:
  - Changing the focus or priorities of innovation efforts
  - Expanding the scope or diversity of innovation activities
  - Adopting new tools, techniques, or approaches to innovation
  - Encouraging a culture of continuous learning and experimentation
- Collaborating with external partners or stakeholders to bring in new perspectives or resources.



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# EXTENSION ADVISORY SERVICES

- Extension advisory services refer to a range of **professional services** provided by **extension agents** or specialists to assist individuals, organizations, and communities in **solving problems**, making decisions, and **improving their knowledge and skills**
- Extension agents and specialists work closely with clients to identify their needs and goals.
- Extension services are often **delivered** through a **variety of channels**, including in-person meetings, workshops, webinars, and other forms of outreach.



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# ROLE OF EAS IN AIS

- Extension advisory services play a crucial role in the agricultural innovation system by providing **information, guidance, and support to farmers**, agribusinesses, and other stakeholders in the agricultural sector.
- EAS can also help farmer to **overcome any barriers to adoption**.
- **Some common activities of EAS :**
  1. **Providing information and guidance** on best practices that can impact productivity and profitability.
  2. **Facilitating the adoption of new technologies**, by providing **training and support** to farmers and other stakeholders.
  3. **Supporting** the development of **new agricultural products** and value chains.
  4. Working with farmers and other stakeholders to **identify** and address **local challenges and opportunities**.



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## **ROLE OF EAS IN AIS- Information delivery**

- The **role EAS in AIS-** multifaceted and can involve **providing information** and technical assistance, and building capacity and empowering stakeholders
- EAS helps in **facilitate flow of information and knowledge with in AIS.**
- In terms of information delivery- EAS use various ways:
  1. Field days demonstration
  2. Information material
  3. One-on-one support
  4. Group meeting
  5. Online platforms



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# CASE STUDY



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## AIS IN SRI IN TRIPURA

- ❑ **System of Rice Intensification** is the methodology to increase the productivity of irrigated rice by changing the **management of plant, soil, water and nutrients** particularly by greater root level.
- ❑ (SRI) has been adopted in the **Indian state of Tripura**, as a way to improve the productivity and sustainability of rice production.
- ❑ Rice is an important staple crop in the region, and SRI has been promoted as a way to **increase yields and profitability**, as well as to **reduce the environmental impacts** of rice production.
- ❑ There have been several initiatives to promote SRI in Tripura, including **trainings and demonstrations** for farmers, as well as research and development projects.





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**1** Seedlings get transplanted at a much younger age.



**2** Only single seedlings, instead of a handful of seedlings get planted in each hill.



**3** Plants are spaced wider apart, and in a square pattern.



**4** Intermittent water application to create wet and dry soil conditions, instead of continuous flood irrigation.



**5** Rotary weeding to control weeds and promote soil aeration.



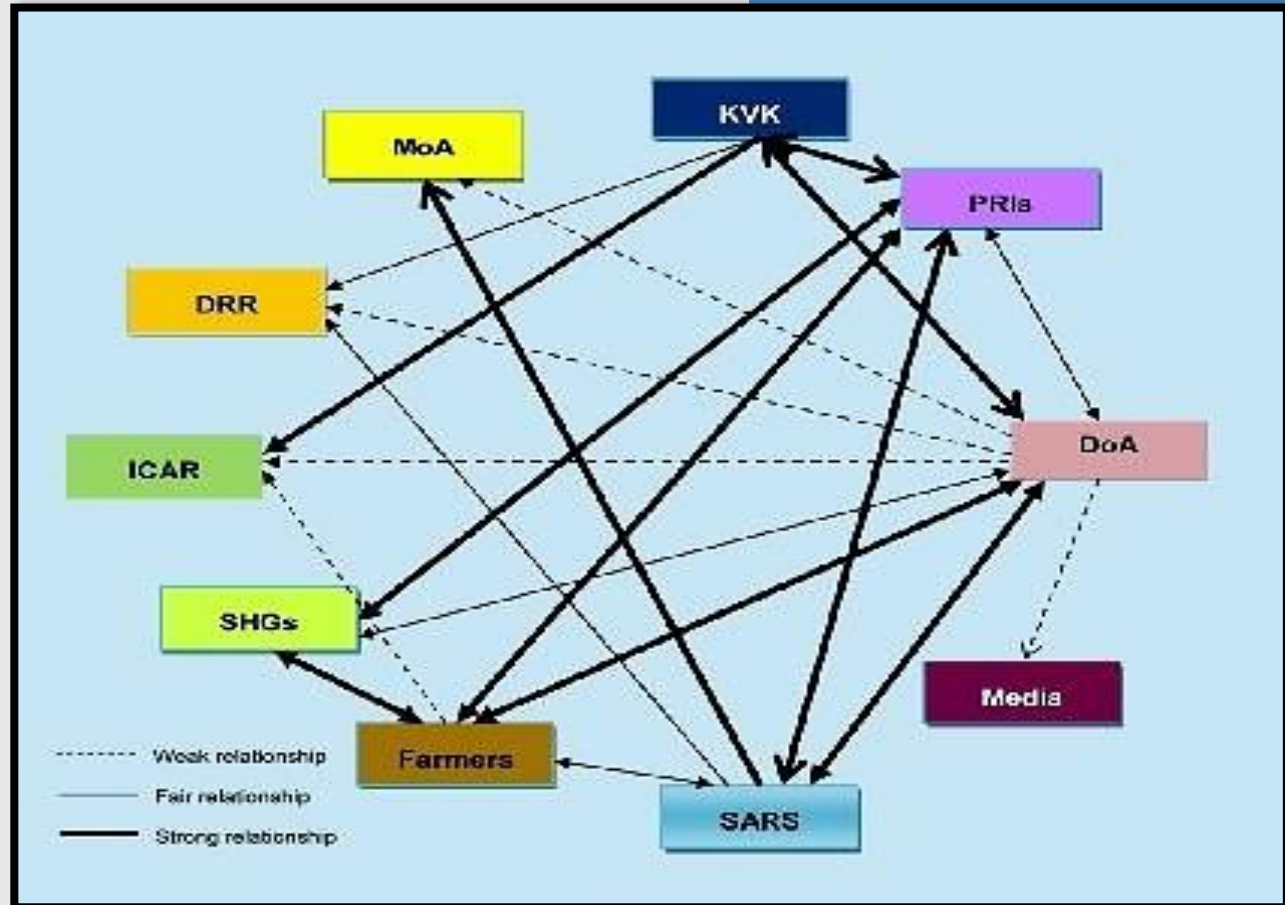
**6** Increased use of organic fertilizer to enhance soil fertility.





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## EXPERIENCE IN ADOPTION

In Tripura all sections of society are practicing SRI. **Women farmers of tribal and Manipuri community are frontrunners**, and their farm activities and crop management is excellent. Farmers have difficulties in adopting all the SRI principles due to a **mindset** or in other words due to **traditional habits**. Sometimes a **fear psychosis** also prevents switching over to a new system. Farmers who have practiced the SRI for **two to three seasons** could easily **overcome the difficulties**. Some of the key **challenges** faced by farmers in the state include **limited access to credit, inadequate infrastructure**, and **limited knowledge** about modern farming techniques.



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# CONCLUSION- case study

Overall, the SRI is a profitable venture with dual advantage i.e. reduced costs and increased returns. The yield obtained under SRI is almost double than the conventional method which is essential from the food security point of view. To meet the increasing food demands, it is necessary that farmers should go for innovative alternatives which give more output from the same piece of land without increasing the total costs. In nutshell, adoption of SRI would give higher yields and profitability improving socio-economic situation of practicing farmers in the region