

# A Holistic Lens on Rice Value Chain Pathways in Senegal: Policy Interventions

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Based on the findings of the study, the following are a list of viable policy interventions that can be undertaken to improve livelihoods and sustainable production in rice systems in Senegal.

1. Increase resource-use efficiency (e.g. replace inefficient with efficient irrigation equipment)  
This includes for example:
  - Decrease of expenditure for (inefficient) irrigation equipment frees money for other purposes
  - Increase of expenditure for efficient irrigation equipment
  - Support small-scale irrigation equipment
2. Reduce mineral fertilizer and increase natural fertilizer use (e.g. soil fertility enhancement)  
(see also synergy)

This includes for example:

- Increase of natural fertilizer use (by increasing subsidies, Encourage producers to produce, collect and market their own natural fertilizers supporting the implementation of alternative approaches (such as the use of organic fertilizer derived from the Non-Sewerage Sanitation System along the fecal sludge Management treatment facilities) and training on its production, see training on SLM)
  - Decrease of mineral fertilizer use (by decreasing subsidies)
3. Reduce pesticide use and increase integrated pest management (e.g. botanical extracts for pest management) (see also resilience)
  4. Implement agro-livestock integration (see also recycling)
  5. Diversify production and increase income
  6. Implement and invest in climate change adaptation (e.g. local seed use, moisture management, research, restore habitats<sup>1</sup> etc.)

This includes for example:

- Support the construction of dikes and bunds in the lowlands to retain / manage the "surplus" rainwater and control salt

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<sup>1</sup> We use investments in adaptation for agriculture in a rather broad sense that include covering of adaptation cost for agriculture, water supply and natural ecosystems (UNFCCC 2007), respectively agriculture, extreme weather events and water supply / flood protection (UNEP 2014a). Based on the mentioned adaptation cost literature these adaptation investment needs sum up to around 33-42% of total adaptation investment needs.

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7. Enhance the provisioning of ecosystem services while ensuring the social foundation for inclusive and sustainable development **by enabling the implementation of sustainable land management supporting specifically small-scale production, processing and storage in a holistic way (see also synergy)**

This includes for example:

- Training, awareness raising, research but also access to equipment and credit, investment in small scale mills and community storage options, as well as support of marketing of AE products, more specifically:
- Increase farmer training of integrated and agroecological crop management options (including systems of rice intensification in both lowland and upland rice), and include Agroecology in Senegal's national agricultural and education policies so, that academic training and the ongoing training of agricultural extension agents includes agroecology and they will be able to support farmers with the needed skills
- Participatory research; Support the development and the official recognition of knowledge provided by the agroecological farms; Support research on scaling up agroecology, identifying needs by producers as barriers to scaling up, working with research institutions, conducting participatory research including producers, capitalizing on results, and to popularize them
- Support production and subsidize the provision of small tillers for use in traditional/small-scale rice fields
- Support for smaller and medium sized decentralized mills and storage facilities managed by the communities (providing benefits, such as capacity for milling by-products to be allocated to other uses, such as animal feed, field fertilizers, breweries or other sectors, reduction of transportation costs, higher prices for producers, lower prices for consumers, greater market efficiency and availability at the community markets)
- Increase public awareness of the potential for agroecological practices to protect the environment through the rational management of water and regeneration of soils
- Promotional efforts towards greater diversity in cultivation and consumption of crops (for example promoting other grains such as millet, maize and fonio instead of focusing on rice only, but also the diversity within rice: high quality and broken rice to match the food preferences of the Senegalese consumer).
- Support financial organizations to extend credit and micro-credit to provide preferential terms to producers or traders of agroecological products only, and other producers or traders otherwise contributing to resilience.
- Encourage the procurement by public services of agroecological rice (Hospitals, schools, armed forces, prisons, etc.)
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8. Reconnect producers and consumers by strengthening short food circuits and local markets, including small scale production and processing (see culture and food traditions)
9. Support farmers institutions and community-based cooperatives improving access to training, markets, inputs, capital, information, research, storage and processing options on a community level as well as the organization of marketing

This includes for example:

- Document, capitalize and share traditional knowledge among producers, support agroecological community management and more exchanges between agro-ecological producers in Senegal and those in countries like Burkina Faso and Benin. The activities are strongly connected to the policies listed under SLM)
10. Prevent the depletion of natural resources through land and natural resource governance
  11. Develop and apply land management policies, particularly on the part of local government, that recognizes legal land ownership by women and youth, and explicitly allocates land for agroecology, including registration of land designated for agroecology with market values, so that land holders have access to credit
  12. Dissemination of technology without state involvement (e.g. farmer to farmer propagation, dissemination of best practices, support the development and the official recognition of knowledge provided by the agroecological farms etc.)
  13. Increase the potential of territories to sustain their peoples by reconnecting food habits and culture as well as food production and food consumption (e.g. ensure that rice production matches the food preferences of consumer and promote the cultural value of rice in Senegal)
  14. Job creation through knowledge and labor intensive agroecological production and the formalization of the sector (see culture and food traditions)
  15. Develop and support community seed banks at the local level, including research, inventories, and awareness raising and small-scale seed enterprises
  16. Empower people, especially women and young people at household, community levels and beyond by building knowledge, through collective action and creating opportunities for commercialization (e.g. by promoting their participation in producer groups)