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Evidenced-based policy options for rice import substitution in Africa: Production, Competitiveness and Impact

Aminou Arouna, PhD

Program Leader, Impact
Assessment Economist
(AfricaRice)



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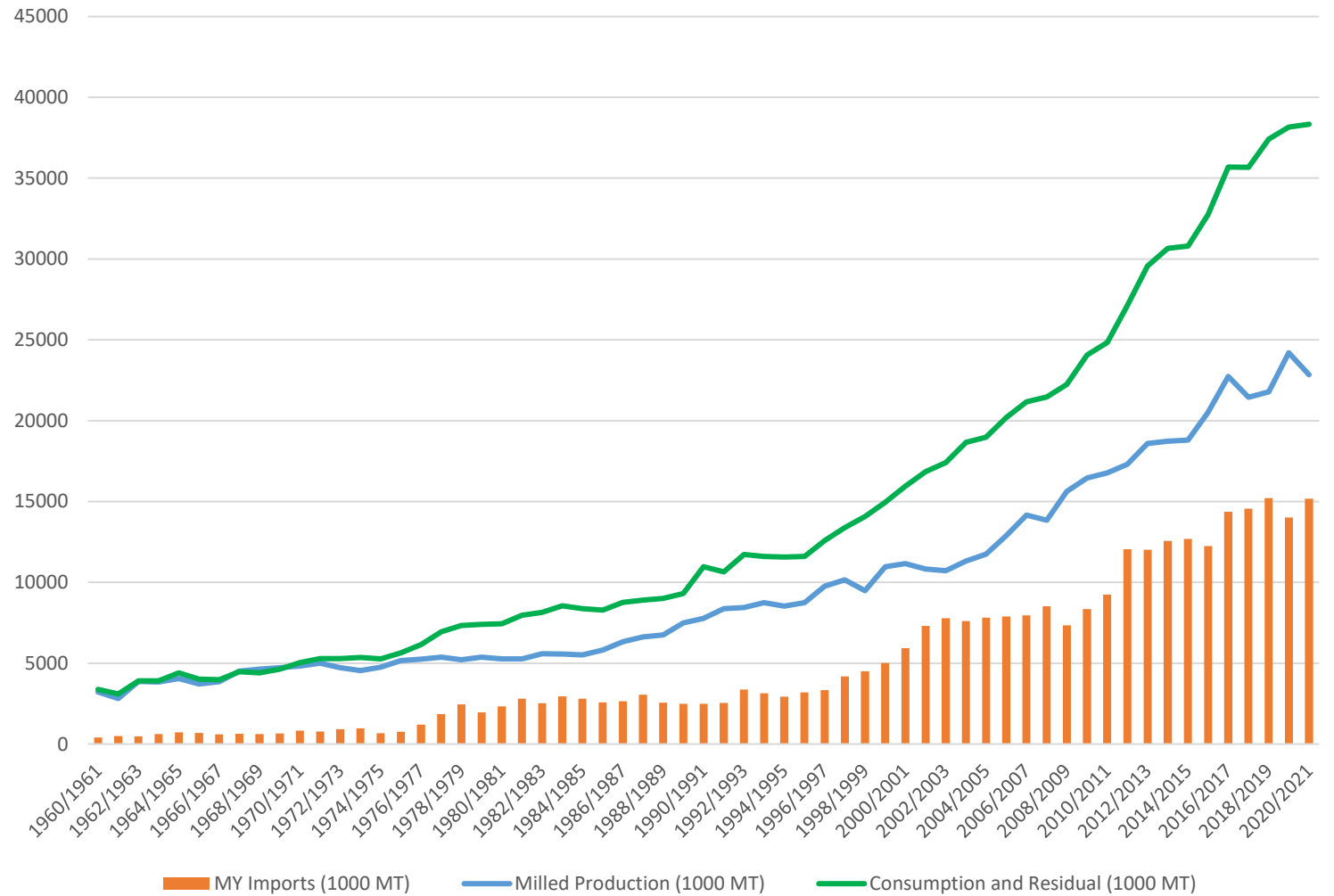
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Outline

1. Background
2. Rice production constraints
3. Rice value chain upgrading and challenges
4. Recent policy options, impact and determinants
5. CIPRISSA model for public-private sector investments
6. Conclusion and way forward

Background

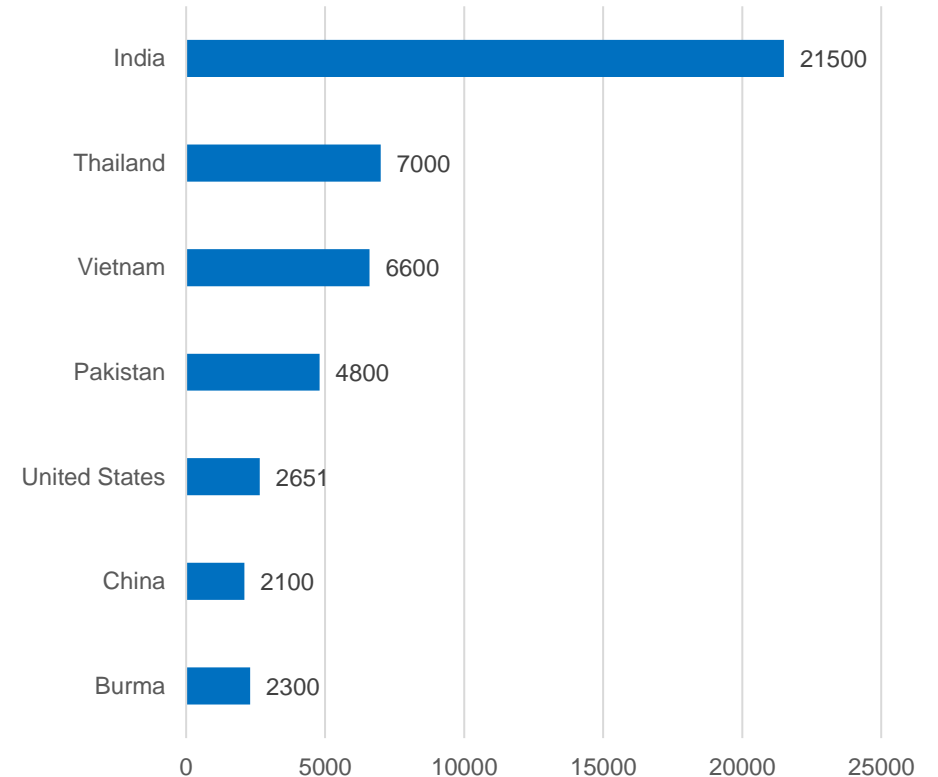
- Staple food for **750 million** people in Africa
- **10%** of world production by Africa
- **Increased gap** between production and consumption
- **Second largest** in the world (31 kg p.c.) in 2030
- What policy measures to reduce the importation?



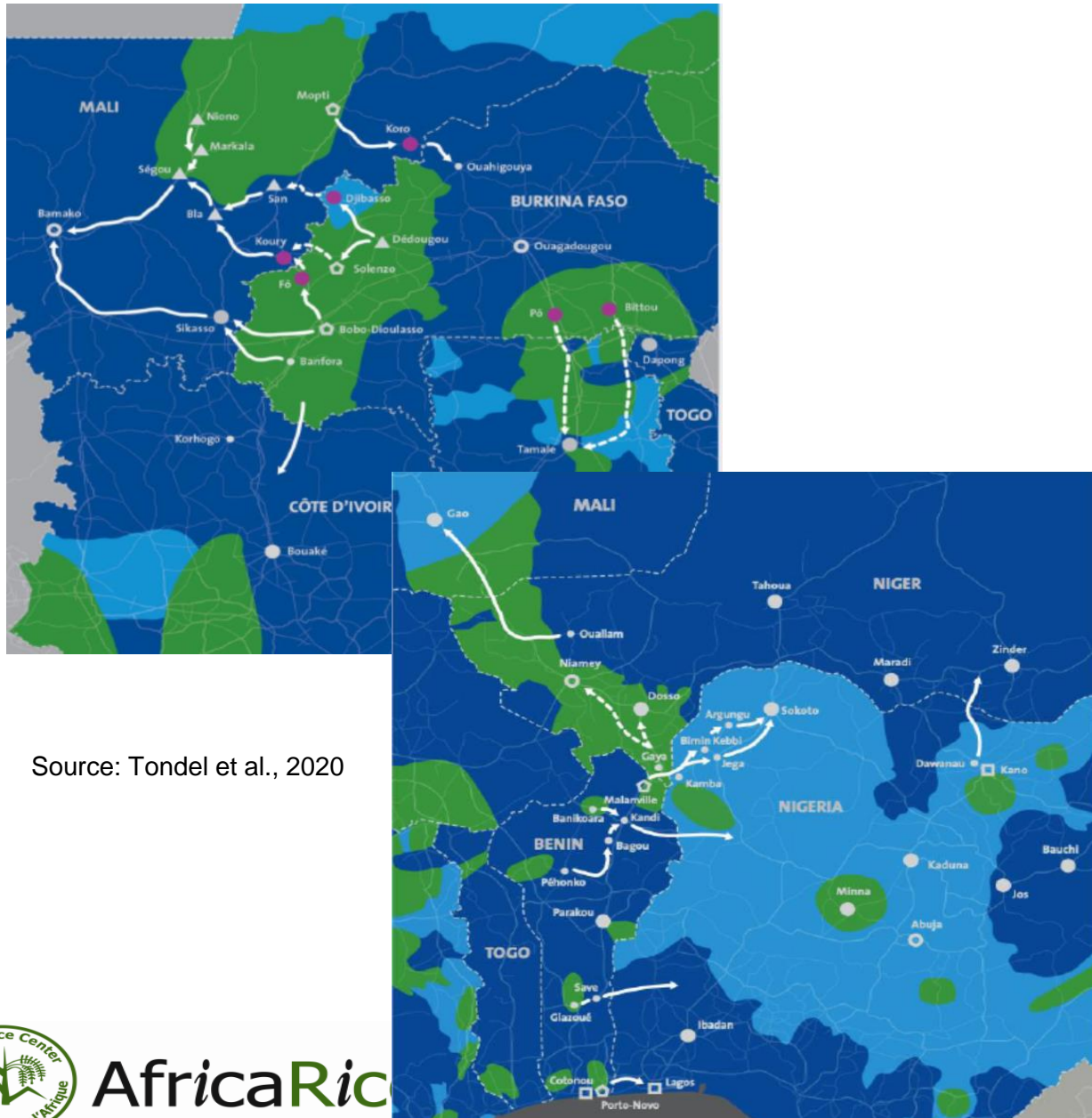
Rice world market

- Rice world market is **volatile**
- India is **first exporter (40% of the export in 2021-2022)**
- **Climatic conditions** are affecting the rice production in the major producing regions of India
- Policy of exportation banned following international crisis (**COVID-19, Russian-Ukraine crisis**)
- Africa should not continue to rely on rice importation

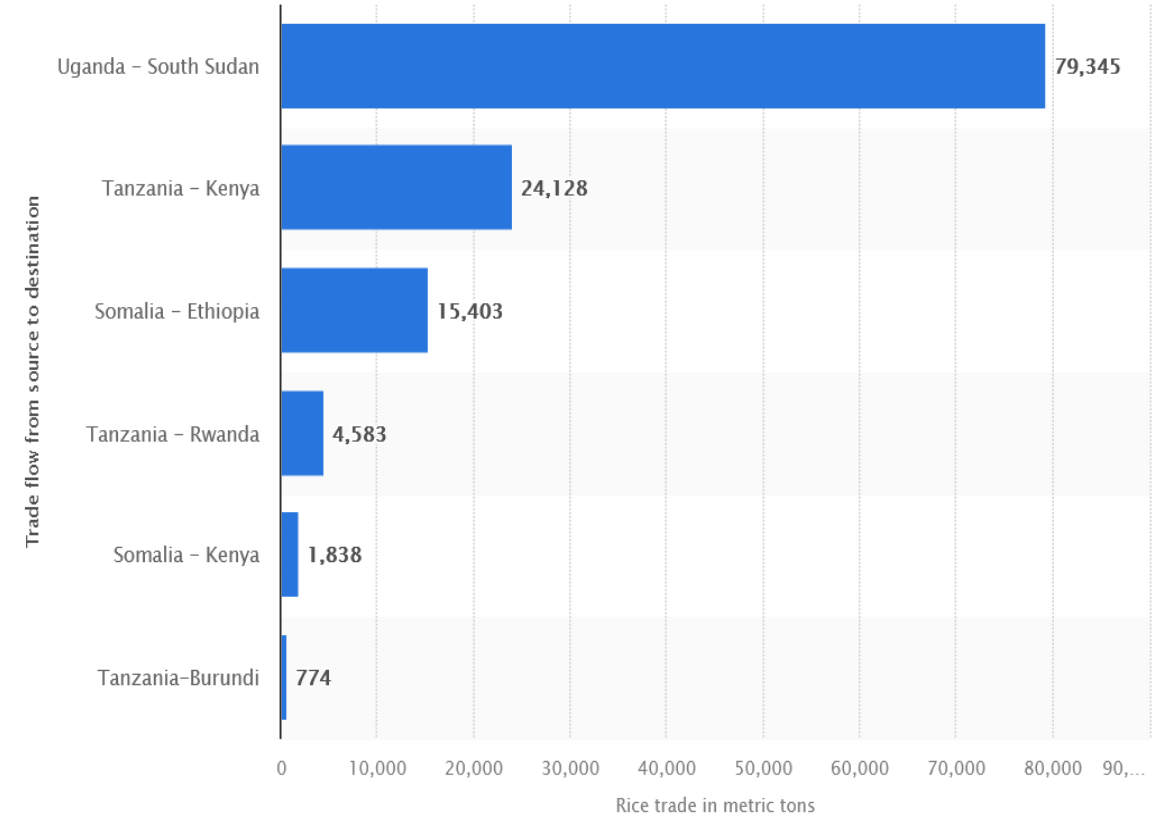
Main rice exporting countries in the world in 2021 (1000 tons)



Rice cross-border trade in Africa



Source: Tondel et al., 2020

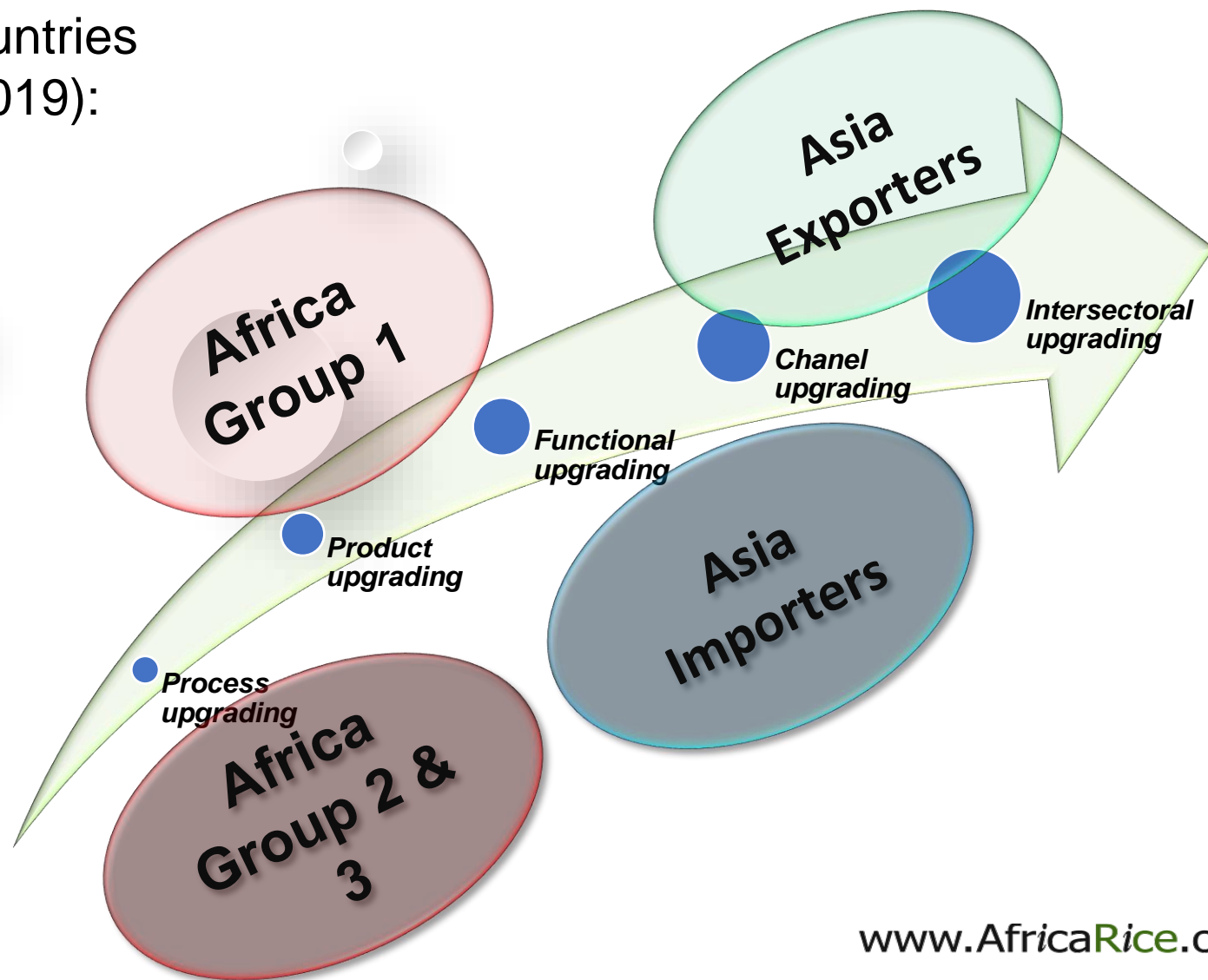


Status of rice value chain upgrading for quality

- Rice value upgrading in Africa is low
- Classification of the West Africa countries into three groups (between 2009-2019):

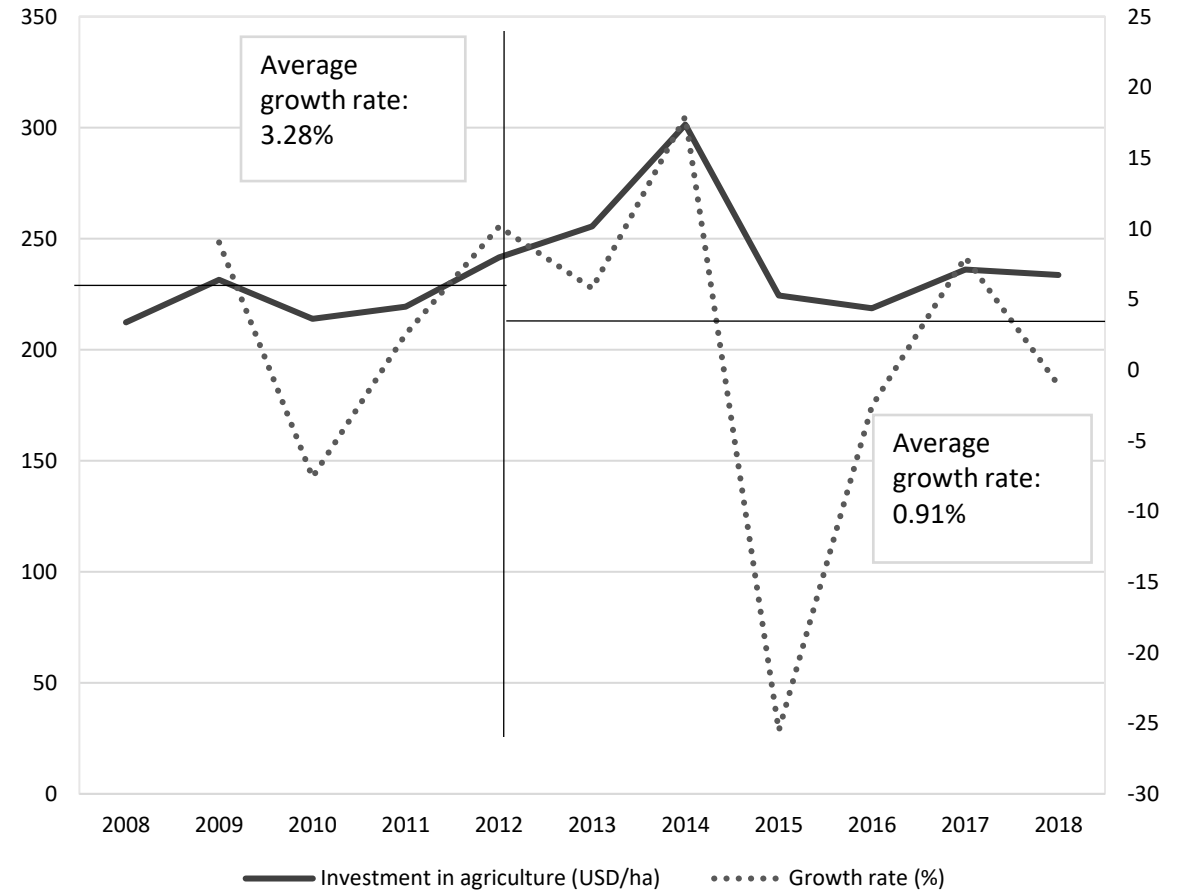
Group 1: Dynamic rice value chain upgrading	Group 2: Moderate rice value chain upgrading	Group 3: No rice value chain upgrading
Nigeria, Senegal	Ghana, Mali, Côte d'Ivoire, Burkina Faso, Liberia, Niger, Sierra Leone, Benin and Togo	Guinea, Mauritania, The Gambia and Guinea-Bissau

Source: Soullier et al., 2020



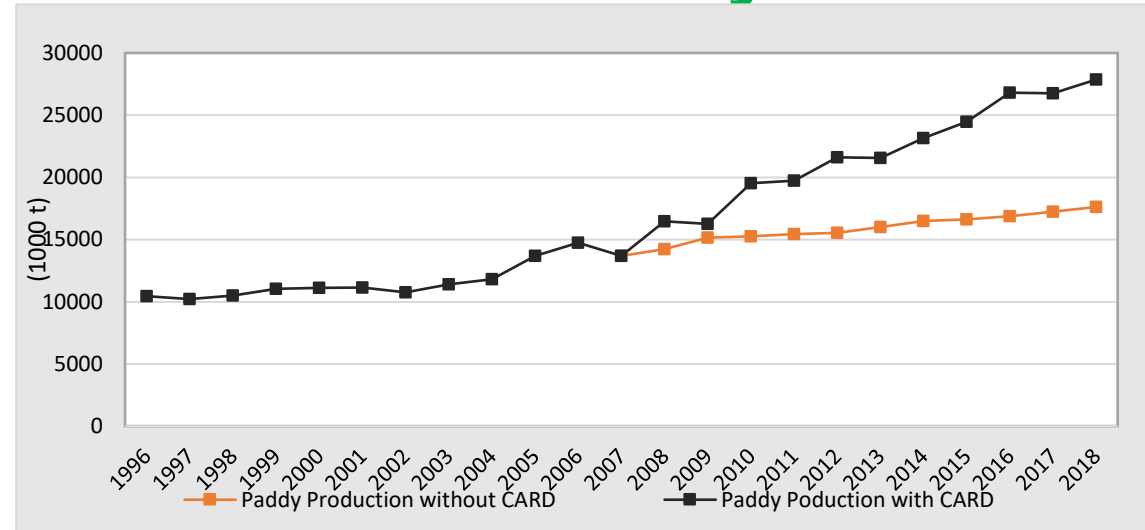
Policy measures for rice value chain

- **Policy measures implemented after the 2008 food crisis**
- **Supply push options:** training on good agricultural practices, seed distribution, input subsidies,
- **Demand pull options:** official demand supplied by local rice, support to credit access, support to milling sector, importation restrictions, etc.
- **However there are two main challenges:** (i) more focus on supply push-factors (ii) unsustainability of policy options

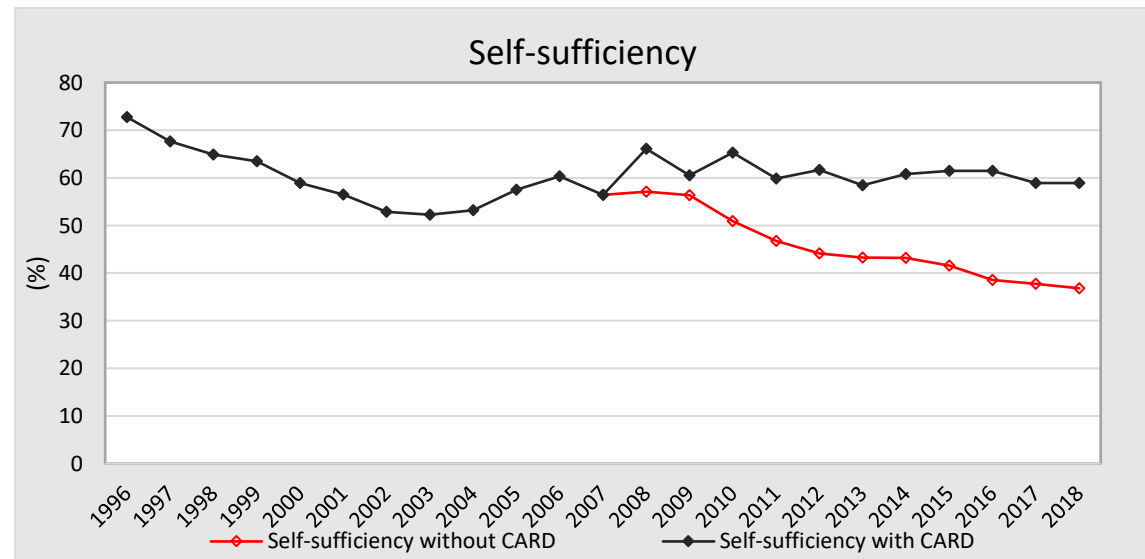
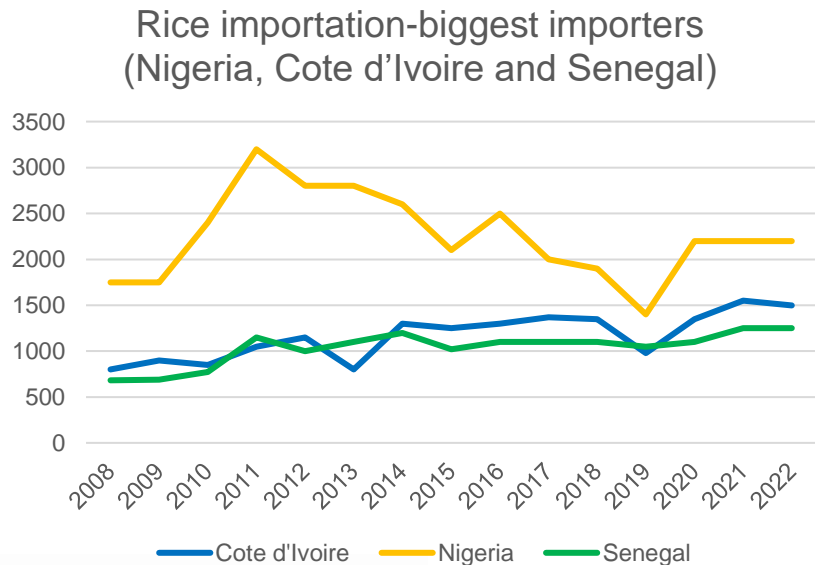


Impact of recent policy measures on rice production and self-sufficiency

- The contribution of the CARD in 2018 was **10.2 MT of paddy rice**
- Rice self-sufficiency would have been **37%** compared to the observed value of **59%** in 2018
- Imports decrease in Nigeria from **2011 to 2019** and remained constant between 2021-2022



Comparison of paddy production with the CARD and the counterfactual scenario



Comparison of self-sufficiency with the CARD and the counterfactual scenario



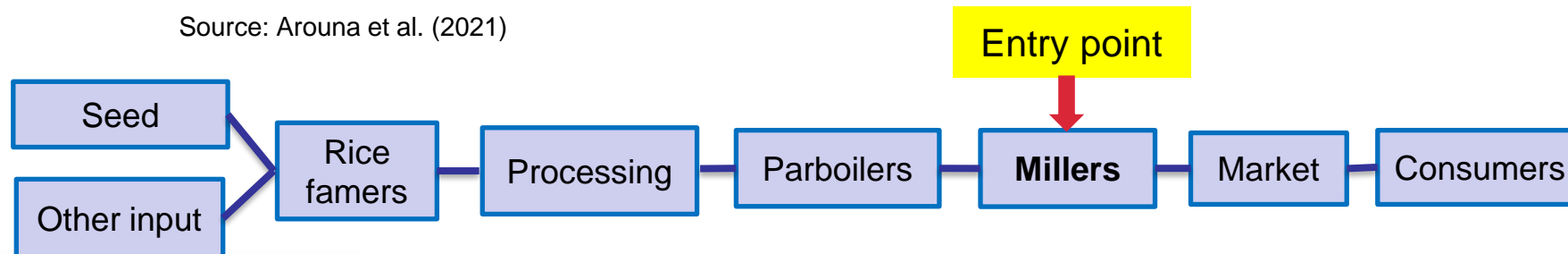
Determinants of policy measures impact on rice production

- **Demand-pull factors** have a stronger effect on the contribution of CARD to production than do investments in supply-push factors
- High investments in value-chain upgrading have obtained 0.45 MT per year more than countries with no evidence of investments in value-chain upgrading

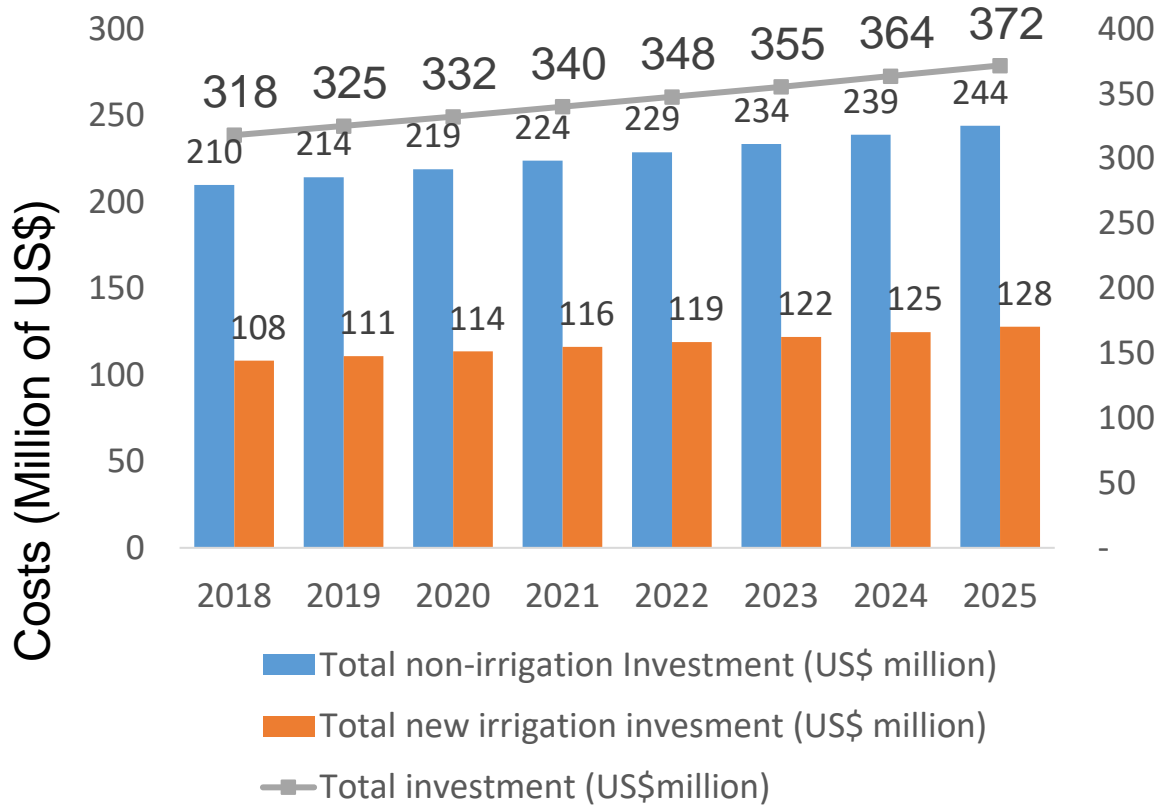
Table. Determinants of cumulative impact of CARD on rice production over 2008-2018

Variables	Coefficients	Robust standard errors
Number of varieties release or adopted (number)	182.48***	58.28
Fertilizer used per hectare (kg/ha)	40.82	39.91
Share of irrigated area (%)	-29.06	18.46
Number of extension agents (number)	0.00	0.05
Moderate value-chain upgrading investment (dummy)^Y	1504.71**	697.73
High value-chain upgrading investment (dummy)^Y	4478.37*	2459.40
Coastal countries with preference for local rice (dummy)^f	2959.13*	1530.67
Coastal countries with preference for imported rice (dummy) ^f	836.48	1233.38
Constant	-2893.75*	1492.95

Source: Arouna et al. (2021)



CIPRiSSA model for investments for 10 pilot countries (US\$ million)



Total investment needed over 8 years: USD 2.754 billion

- AfricaRice and its partners have developed a number of **technological and institutional innovations** in rice value chain to support the investments

Costs (Million of US\$)



Conclusion and way forward

- **Reduction of rice importation policy measures:** need to continue **and be sustained especially** in major rice consumption countries (e.g. Nigeria, Senegal, Cote d'Ivoire)
- Sustainable investments on **demand-pull factors** such as private-led modern milling sector and contract farming development should be prioritized
- Attract **private national and foreign investment** in the rice sector and strengthen Public-Private Partnership Research Oriented (COSEM-Riz, etc.)

Thank you !