In addition, seven PhD students from five countries and 11 MSc scholars from seven countries have started thesis work in agronomy, mechanization, policy and institutions, and gender through collaboration with African universities. Over 19–36.4% women have benefited.

Youth entrepreneurship development initiated

Through the IPs, the SARD-SC rice value chain is systematically catalyzing the engagement of the youth (households) in rice value chain entrepreneurship, particularly in:

- Certified rice seed production, distribution, and marketing.
- Packaging, labeling, branding, and marketing of locally produced rice.
- Fabrication and maintenance of farm equipment and tools.
- ICT-based tools for improving knowledge sharing on rice productivity and enterprise development.
Mechanical rice weeders available for farmers

Of the mechanical rice weeders and threshers tested and adapted, the ring hoe weeder is the most preferred by farmers especially women, followed by the straight-spike weeder. To date, however, the ASI Thresher is the most widely disseminated farm equipment and indigenous small-to-medium private enterprises are actively engaged in its fabrication and marketing. Hanigha Nigeria Limited in Kaduna, Nigeria, in particular, fabricated and sold ASI/ATAT threshers to private farms and government projects in Nigeria.

Using Innovation Platforms to engage stakeholders in the value chain

Innovation platforms (IPs) in the rice value chain of the rice sector development hubs have started to enhance the quality of interaction, relationships, confidence, and trust among rice value chain stakeholders. This is shaping business opportunities and influencing local decision making processes, including policies and institutions and contributes to improved livelihoods and institutional change among the diverse social and economic operators in the rice value chain.

In some IPs in the Republic of Benin, significant changes among rice value chain actors were observed. Women processors in the one of the IPs, who reportedly processed only 1 ton of paddy per month before the establishment of the IP, have increased their capacity to 10 tons/month. Through the IPs, a rice mill in one of the rice Hubs accessed 1000 ton paddy compared to 500 tons before the IP was established. To contribute to increased food security in the Republic of Benin, some of the milled white rice is marketed by a government agency (ONASA) at a reduced price. Millers’ income reportedly increased by 25−50%.

The microfinance institution Caisse Locale de Credit Agricol Mutuel (CLCAM) provided 10 million CFA credit to farmers and processors before the establishment of the IP. This increased to 21 million CFA with the IP in place. Although the loan was not fully paid back in 2013 due to the drought in that year, full payment was made in 2014 when yields were good. The government input dealer (CARDER) reported a 35% increase in sales as a result of its active engagement in the IP process.

Extension advice and support to rice stakeholders in the IP areas also improved. Because of the IPs, the number of rice farmers directly reached by the government extension service (CARDER) increased from 100 to 250 in the Bante IP, for example. Similarly, the number of villages in which the NGO MRJC that facilitates youth engagement, increased from four to nine and many of these rice producers now visit the NGO to seek technical advice on rice production.

Traders in the Bante area who sold 15 tons (t) of milled rice per month before the functioning of the IP are now selling 20−25 t/month. Because the quality of rice processed by IP members is better, the consumer price of long grain rice has increased from 600 CFA to 700 CFA per kilogram. The price increase did not negatively affect consumer behavior. On the contrary, consumers have encouraged traders to continue the process of quality enhancement of locally produced rice for household food security.

Capacity of stakeholders enhanced

The SARD-SC project has enhanced competence and skills of 451 NARS partners in crop management, marketing, integrated rice management (IRM), data analysis, multi-stakeholder IPs in the rice value chain, and finance/accounting for project funds.

In particular, 44 local manufacturers were trained on the fabrication and maintenance of farm machinery and equipment, while 12 IP facilitators are being trained to establish and facilitate functional IPs in the rice value chains of the various rice hubs.