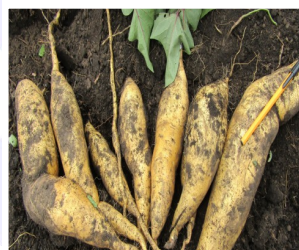




ANNUAL IMPLEMENTATION PLAN 2025



Promoting Excellence in Agricultural Research for Sustainable Development

NARI Annual Implementation Plan 2025

(Corporate Plan 1/2025)

National Agricultural Research Institute

Lae, Papua New Guinea

Distribution of the final document will be available through our website
(<https://www.nari.gov.pg>) or by contacting:

The Director General
National Agricultural Research Institute
Sir Alkan Tololo Research Centre
NARI Head Office
P.O. Box 4415
Lae 411
Morobe Province, Papua New Guinea

Phone (Reception): 675 4784000

Email: naripng@nari.gov.pg

Recommended Citation: National Agricultural Research Institute, 2025. Annual Implementation Plan 2025, Corporate Plan 1/2025, National Agricultural Research Institute, Lae, Papua New Guinea.

Copyright © 2025 National Agricultural Research Institute (NARI)

The **National Agriculture Research Institute (NARI)** was established by an *Act of the National Parliament of Papua New Guinea (PNG)* in July 1996 as a public funded, statutory research organisation to conduct and foster applied and adaptive research into:

- I. any branch of biological, physical and natural sciences related to agriculture;
- II. cultural and socio-economic aspects of the agricultural sector, especially of the smallholder agriculture; and
- III. matters relating to rural development and of relevance to Papua New Guinea.

NARI is responsible for providing technical, analytical, diagnostic and advisory services and up-to-date information to the agriculture sector in PNG.

In its Vision for PNG, NARI sees *Prosperous PNG Agricultural Communities* through its Mission of promoting innovative agricultural development in PNG through scientific research, knowledge creation and information exchange. This is to be accomplished through the Institute's Purpose (Strategic Objective) of enhanced productivity, efficiency, stability and sustainability of the smallholder agriculture sector in the country so as to contribute to the improved welfare of farming and rural communities who depend wholly or partly on agriculture for their livelihoods.

Table of Contents

Summary of Key Activities and Achievements in 2025.....	1
Sector Policy support:.....	1
Research for Development achievements:.....	1
Institutional Development achievements:.....	1
1. Introduction.....	2
2. Alignment with the National Agricultural Sector Plan 2024-2033.....	3
3. Structure of the Annual Implementation Plan.....	4
4. Research for Development Priorities.....	4
4.1 Priority 1 – Economic Development and Value Chains.....	4
4.1.1 RA Foresighting and Advocacy.....	4
4.1.2 RA Value Chain Support.....	4
4.2 Priority 2 Resilient Systems.....	6
4.2.1 RA 3 Household Resilience.....	6
4.2.2 Result Area 4 – Agro-eco system resilience.....	7
4.2.3 RA Biosecurity.....	7
4.2.4 Result Area Genetic Resources.....	8
4.3 Priority 3 Nutritious Food and Healthy Diets.....	9
5. Communication 4 Change.....	9
6. Technical Services.....	10
7. Strengthening Institutional Efficiency and Effectiveness.....	10
7.1 Advocacy and Visibility.....	11
7.2 Diversifying Funding Sources.....	11
7.3 Investing in Human Talents.....	12
7.4 Management of financial and material resources.....	12
Annex. 1 Contribution of the NARI Strategy and Results Framework.....	13
Annex 2. List of currently implemented projects and studies in 2025.....	14
Annex 3. Expected Results in 2025 from implementation in RAs.....	16
Annex 4. NARI Income and Expenditure Plan 2025.....	27

Acronyms and Abbreviations

ACIAR	Australian Centre for International Agricultural Research	IFPRI	International Food Policy Research Institute
ADD	Agricultural Development Domain	IRC	Islands Regional Centre
AIP	Annual Implementation Plan	ITPGRFA	International Treaty for Plant Genetic Resources for Food and Agriculture
AR4D	Agriculture Research for Development	JAAS	Jiangsu Academy of Agricultural Sciences
ASF	African Swine Fever	JICA	Japan International Cooperation Agency
BSFL	Black Soldier Fly Larvae	LLG	Local Level Government
BWAP	Banana Wilt Associated Phytoplasma	MOU	Memorandum of Understanding
CC	Climate Change	MOV	Means of Verification
CIP	Capital Investment Program	MRC	Momase Regional Centre
CM	Centre Manager	MTDP	Medium-term Development Plan
DFAT	Department of Foreign Affairs and Trade	NAIC	National Agricultural Insect collection
DG	Director General	NAQIA	National Agricultural Quarantine Inspection Agency
DOI	Digital Object Identifier	NARI	National Agricultural Research Institute
EHP	Eastern Highlands Province	NARS	National Agricultural Research System
EU	European Union	NASP	National Agricultural Sector Plan
FC	Financial Controller	NATTB	Nat Apprentice and Trade Testing Board
FPDA	Fresh Produce Development Agency	PGR	Plant Genetic Resources
GESI	Gender and Social Inclusion	PM&E	Planning Monitoring & Evaluation
GHG	Green House Gases	PNG	Papua New Guinea
GIS	Geographical Information Systems	PPT	Power Point
GLIS	Global Information System for PGR	RA	Result Area
GoPNG	Government of PNG	SCMC	Salary Conditions and Monitoring Committee
GW	Galip Weevil	SHP	Southern Highlands Province
HARC	High Altitude Regional Centre	SIP	Strategic Implementation Plan
HRC	Highlands Regional Centre	SOP	Standard Operating Procedure
HT	Human Talent	SRC	Southern Regional Centre
HTMDS	Human Talent Management and Development Strategy	SRF	Strategy and Results Framework
IAEA	International Atomic Energy Agency	TC	Tissue Culture
ICDF	International Cooperation and Development Fund	TO	Technical Officer
ICIPE	International Centre for Insect Physiology and Ecology	TVET	Technical and Vocational Education and Training
		WHP	Western Highlands Province

Summary of Key Activities and Achievements in 2025

Sector Policy support:

- NARS Policy Framework developed for enhanced collaboration and cohesion of NARS organisations in support of the implementation of the National Agricultural Sector Plan;
- Contribution to the integration of Master Farmer Certification into TVET and NATTB

Research for Development achievements:

- Publications on economic opportunity of selected crops at commercial scale (sago, breadfruit, betel nut, apples etc.)
- Key research intervention supporting rice and taro commercial development planned and funding mobilised;
- Information and Technology package on climate change adaptation options;
- Information and Technology package on small scale mechanisation and irrigation;
- Demonstration site and Technology package on small scale Black Soldier Fly applications;
- Release of new rice and wheat varieties as short-duration crops;
- All PGR collections at NARI captured with a full set of accession and passport data in the NARI PGR information system based on GRIN-Global;
- Publication of the first volumes of *Journal of Agriculture, Forestry and Fisheries* and *Harvest* magazine;
- Partnership established with other NARS for contribution to a Sector Information System hosted by NARI;
- Agricultural Innovations Show 2025

Institutional Development achievements:

- Bill drafted with amendments to the NARI Act 1996 as necessary for submission to Parliament
- Organisational structure with full documentation on positions and its functions implemented
- Improved remuneration package bench-marked against sister organisations approved by SCMC
- New office, laboratory and field research infrastructure developed at SRC Laloki with support of the Jiangsu Agricultural Academy of Sciences, China

NARI Corporate Annual Implementation Plan 2025

1. Introduction

The National Agricultural Research Institute (NARI) is a government funded statutory institution that operates within the strategic framework set by the PNG Government through long and medium-term plans viz. Papua New Guinea Vision 2050, the Development Strategic Plan (2010-2030), the Medium Term Development Plan IV 2023-2027 and other national policies. NARI's institutional objectives are well aligned with the national and sector plans (Figure 1).

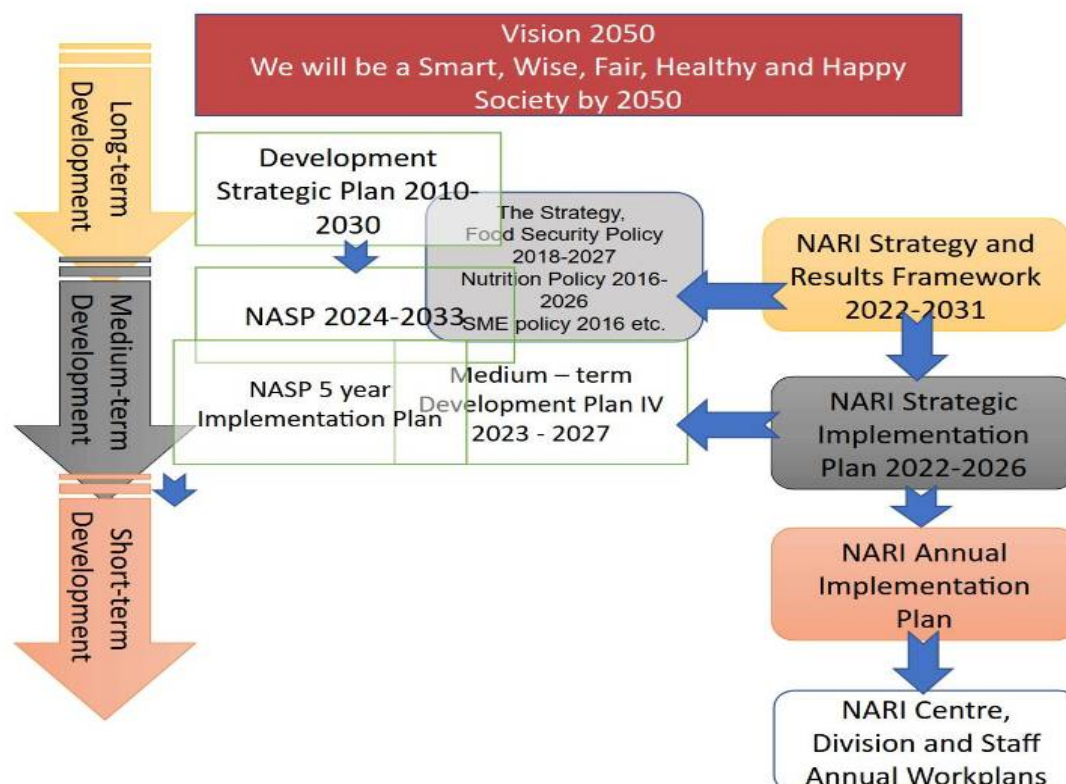


Figure 1: NARI Planning Framework and alignment with National Development Plans

The Strategy and Results Framework (SRF) II 2022-2031 provides the overall context and direction for the priorities set by the Institute in this 10-year planning time frame. The Strategic Implementation Plan (SIP) 2022-2026 outlines the 5-year priorities and target results for the Institute to achieve in its contribution in AR4D. The NARI AIP 2025 is the last tier document in the NARI planning and implementation process as depicted in Figure 1. The plan provides an overall framework for NARI's Research for Development priorities, key performance indicators and planned implementation in 2025.

The AIP is an important planning and management tool to ensure that implementation processes required for achieving short to medium term outcomes are followed. Annual plans assist in allocation of resources, monitoring implementation progress of activities and aid in making necessary adjustments and taking corrective actions. They also allow for on-going planning, evaluation and periodic reviews and reporting and further aid in impact assessment exercises.

The implementation of the annual plan is coordinated from NARI's eight establishments, comprised of Highlands Regional Centres at Aiyura and Tambul; Momase Regional Centre at Bubia including Labu; Islands Regional Centre at Keravat; Southern Regional Centre at Laloki; Kilakila (Insectory and Chemistry Laboratory) in Port Moresby and the Head Office at Bubia.

The AIP will be monitored on a quarterly basis for implementation of activities and inputs, and realisation of outputs and outcomes. This will be summarised in a six-monthly progress report. An annual report will provide an assessment of delivered outputs, accomplished milestones and achieved outcomes as stated in the annual implementation plan.

2. Alignment with the National Agricultural Sector Plan 2024-2033

The National Agricultural Sector Plan 2024 – 2033 was launched in 2024 and since provides the guidance to NARI and other sector agencies on agricultural research for development. NARI has embraced the clear direction to support the envisaged shift towards market-driven commercial agriculture. While the NARI SRF 2022-2031 was developed before the NASP was completed, the SRF and SIP are well aligned with the medium-term sector strategies outlined in the NASP (Figure 2 and Annex 1 Contribution of the NARI Strategy and Results Framework to the long-term vision, mission and objectives of the National Agricultural Sector Plan).

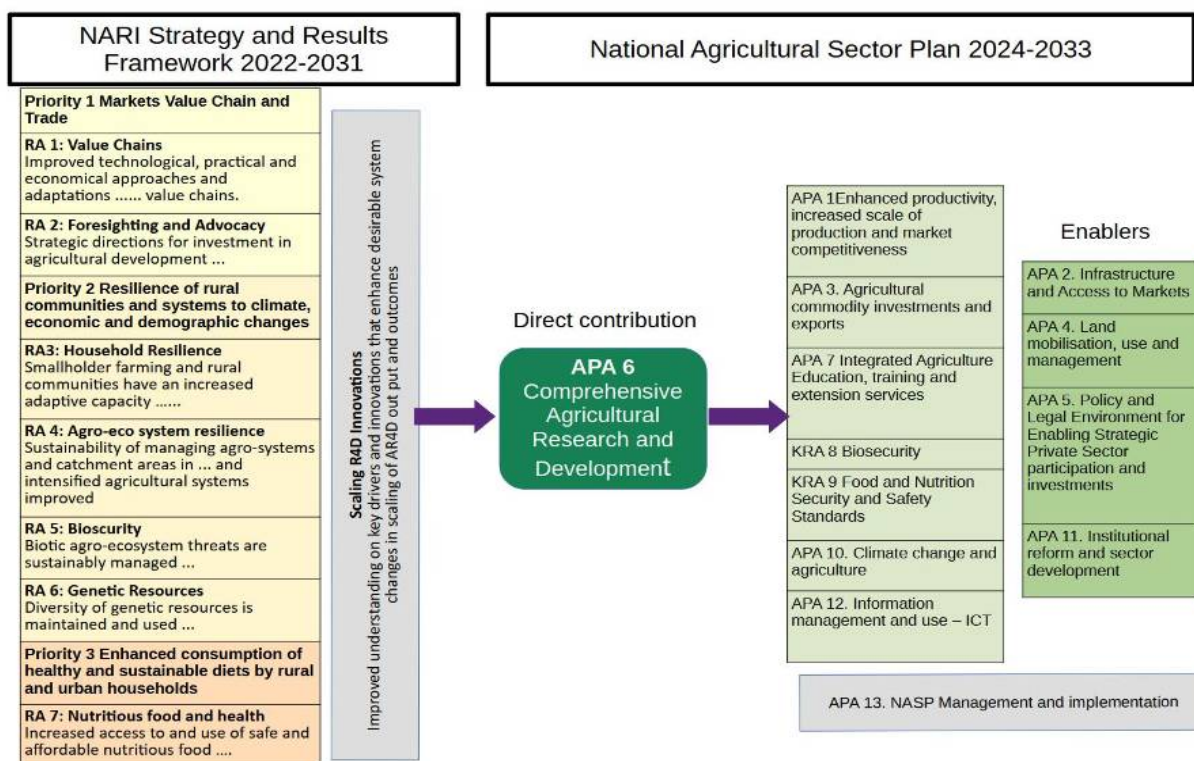


Figure 2: Alignment of the NARI Strategy and Results Framework and pathways of contribution of NARI's AR4D interventions to the NASP 2024-2033

NARI will contribute to the achievement of NASP objectives and strategies with innovations arising from research interventions addressing the needs, constraints and opportunities of farming communities and other stakeholders in the wider AR4D system. The contribution will be captured

and coordinated through the NASP Agricultural Priority Area 6 Comprehensive Agricultural Research and Development.

3. Structure of the Annual Implementation Plan

The AIP 2025 is linking to the framework outlined in the SIP 2022-2026 and the anticipated outputs identified in the seven Result Areas (RA) within the three major priorities viz. Markets, Value Chains and Trade; Resilient Systems; Nutritious Food and Healthy Diets.

The different sections of this plan are organised by Priority and Result Areas highlighting the anticipated achievements coming from the implementation of the various projects and studies funded by donor grants, the GoPNG Public Investment Program and the Institute's own resources (Annex 3) while more details on the planned achievement of Institute Results can be found in Annex 4. The last sub-section shows the key outputs planned as part of Institutional Management and Development. Routine activities and associated outputs in day-to-day management are not displayed.

4. Research for Development Priorities

4.1 Priority 1 – Economic Development and Value Chains

4.1.1 RA Foresighting and Advocacy

The Result Area Foresighting and Advocacy is broadly designed to conduct strategic research in identifying AR4D investment opportunities and gathering information that will inform policy and priority setting at national and institutional level.

A series of publications are planned for 2025 on the assessment of alternative economic opportunities such as growing breadfruit, betel nut, marita, sago, kava and apples at commercial scale. This will include targeted monitoring and an overview of world market opportunities and trends.

The development of a policy framework for a better functioning National Agricultural Research System (NARS) is a key initiative for 2025 that NARI has been tasked with as a result of a meeting of DAL, Commodity Boards and other sector organisation under the leadership of the Minister for Agriculture in 2024. The meeting had resolved that there is a need for greater collaboration and contribution by NARS organisations, especially for policy advocacy and resourcing to build capacity and effectiveness for agriculture research, development and innovation to deliver on our collective goals for the sector and 85% of Papua New Guineans who are farmers. This initiative is building on the earlier work on strengthening NARS that was supported by the Australian Research and Development Support Facility (ARDSF) from 2007-2012.

Key outputs from RA 1 Foresighting and Advocacy

- Publications on economic opportunity of selected crops / livestock at commercial scale
- NARS Policy Framework

4.1.2 RA Value Chain Support

The second Result Area focuses on specific priority value chains (see SIP Annex 3 for the prioritisation methodology) and uses a whole-value chain approach to address key bottlenecks

that require research innovation for greater efficiency and productivity, and ultimately greater returns to value chain actors. Economic analysis will play a key role in identifying research gaps and opportunities for scaling of production and contribution to GDP.

a) Root and tuber crops and banana

Since NARI undertook the prioritisation exercise as part of the SIP development, the focus has shifted towards supporting taro and rice supply and value chains. R4D support in the commercialisation drive in taro and rice production will include the development of planting material and seed production standards and the development of research interventions targeting gaps in technology and knowledge for the scaling of taro and rice production in the country such as production system and best practices studies, mechanisation options, economic assessments etc. This will include the mobilisation of necessary resources including research staff and infrastructure (see Section 3).

In support of the potato value chain, NARI will release recommendations on rapid propagation techniques using cuttings as an alternative technique to generate planting material especially in remoter regions where supply with seed potatoes is difficult.

Little research investment has gone into improving the banana value chain despite the importance of banana as a food crops across the country from the lowlands to highland areas up to around 2200m. NARI will continue field trials to understand current yield gaps in banana varieties currently in demand in the market place. The longer term outcome would be recommendations for productive banana production systems in different agro-ecological zones, supplying markets in PNG.

NARI will continue supporting the potato and sweetpotato industry with supply of tissue-cultured potato plantlets to its partner FPDA and pathogen tested quality sweetpotato cuttings to stakeholders as foundation material for further production of quality seed material.

b) Galip nut industry development

The galip nut (*Canarium indicum*) has been for over 30 years received attention as an indigenous nut species with potential for commercialisation and supply to domestic and export markets. Galip development has been part of NARI's R4D portfolio for well over 20 years, generously supported by the Australian Centre for International Agricultural Research (ACIAR). The latest collaboration will come to an end in 2025 with significant achievements to be registered in fostering the emerging private sector, sale of high quality Galip nut products in local supermarkets as well as exploration of export markets. With ACIAR support ending in June 2025, NARI will engage with stakeholders to map out the way forward in fostering the growth of this infant industry.

c) Farming of Black Soldier Fly larvae

NARI has been doing research on the use of the Black Soldier Fly larvae as a protein source in livestock feed. This work has received a further boost with ACIAR facilitating a partnership with ICIPE in East Africa where BSFL farming and its associated value chain has already reached a considerable scale in using organic waste, producing BSFL product for livestock feed and the frass of the BSFL as a high-value by-product for use as fertiliser in crop production.

The initial work in exploring opportunities for a similar value chain operating in PNG has started with NARI working in partnership with the University of Technology with the primary aim to build capacity in BSFL farming, forming partnerships and making assessments on waste sources to determine likely scale of BSFL farming in PNG.

d) Mini Feed Milling Adoption

Research by NARI and partners has delivered strong research outputs for livestock feed formulations and small scale processing. There is continuing demand for this but ongoing success in uptake has been limited. This study will consolidate the research outputs with particular attention to the impact of the supply chain costs and operations on mill operations and profitability.

Key outputs from RA 2 Value chain development

- Key research intervention supporting rice and taro commercial development planned and funding mobilised;
- Documentation of key achievements of NARI's investment into Galip value chain development, repository of publications available and information package on improved production and processing practices, lessons learnt on building a sustainable Galip Nut Value chain;
- Evaluation of small scale feed milling and consolidation of research outputs for scaling;
- Quality taro, sweetpotato, potato planting material production standard, rice seed production standard;
- Publications on small-scale mechanisation/irrigation options (soil preparation, harvesting, post-harvest, processing) for root and tuber crop and rice production and processing

4.2 Priority 2 Resilient Systems

4.2.1 RA 3 Household Resilience

Result Area 3 is focusing on addressing household resilience issues to increase capacity of households and communities to engage in agricultural production using a combination of technologies, strategies and practices that enable more stable production in the face of climate change and other indirect impacts from intensification of commercial crop and livestock production on food and eco-systems exacerbated by climate change. There are two major sub-objectives in this RA, viz. Climate Smart Solutions and Disaster Response.

Climate Smart Solutions

In the past over 10 years, NARI has focused a lot of its efforts on participatory action research working with communities and local partners in GO and NGO across the country to introduce understand their needs in responding to climate and socio-economic changes and increase their skills and knowledge in using climate smart crop and livestock technologies and farming practices.

The focus in 2025 will be to consolidate the implemented interventions over the past 10 years and develop an information and technology (I&T) package with up-to-date technical information on available agricultural technologies and practices for adaptation to changes in seasonal weather patterns impacting production systems. NARI will continue to build on the partnerships it has established with partners in Provinces across the country and further assist in building capacities of extension agents supporting the smallholder communities to build resilient production system.

Disaster response

NARI will continue to strengthen its internal capacity as well as capacity of partners to make a contribution as part of disaster response. The major contribution will be made in contributing to the improvement of weather data and other climate forecast information and agricultural

rehabilitation efforts with the supply of foundation planting materials and breeding stock. In 2025, NARI will also start a new initiative to develop an emergency response seed kit with nutritious vegetable seed to re-establish nutritious food supply after an emergency or disaster.

4.2.2 Result Area 4 – Agro-eco system resilience

This result area has not received much attention by NARI so far which is primarily due to the lack of capacity to conduct relevant research interventions. As part of a project funded by the ITPGRFA – BSF on raising the profile of breadfruit in PNG, the Institute together with the partners LDS and PNGWiaDF will establish demonstration blocks showing agroforestry system integrating a mixture of crops (perennial tree and annual crops) together with breadfruit. Those blocks give opportunity to conduct longer-term studies on productivity of such systems, economic returns, assessments of ecosystem services etc.

Key outputs from RA 3 Household resilience

- Information and Technology package on climate change adaptation options
- Release of new rice and wheat varieties as short-duration crops
- Partnerships with extension agents for capacity building and dissemination of information and technologies

Key output(s) from RA 4 Agro-eco system resilience

- Demonstration blocks of agroforestry systems featuring breadfruit established in four locations (SRC, IRC, Madang and Markham Valley)

4.2.3 RA Biosecurity

NARI contribution to the country's Biosecurity management is in conducting relevant research in the management, monitoring and surveillance especially of endemic biological pest and disease threats to agricultural, horticultural, agro-forestry, and aquaculture production systems, as well as natural eco-systems. NARI's contribution will be in two major areas, viz. Biosecurity management and Biosecurity preparedness

Biosecurity Management

Over the past five years, NARI has been working with other partners in the Pacific to test safer pesticide options for the control of the Diamond-back moth, a serious pest in vegetable production as well as management options for the Fall army worm. This work is now concluding with the scientific publication of the findings and development of materials for extension agents and farmers.

Biosecurity preparedness

In late 2023, NARI started to coordinate a new initiative supported by the CABI PlantWise Plus Program to build capacity for improving the plant health system in PNG. The activities will continue in 2025 and continue to focus on:

- Pest preparedness: coordinating and strengthening systems for detection and response to pest outbreaks
- Safe and efficient use of pesticides: increasing awareness of, access to and use of affordable integrated pest management solutions

- Farmer advisory services: enhancing knowledge and uptake of integrated pest management practices through responsive digital advisory tools

The National Agricultural Insect Collection facility at Kilakila in Port Moresby, is an important service that the Institute is providing to stakeholders in term of pest diagnostics but also for the purpose of trade facilitation. Work will continue in 2025 with the digitisation of records for easier online access to stakeholders.

Key outputs from RA 5 Biosecurity

- Recommendations on management of Diamond-back moth with safer pesticide options
- Management strategies for Banana Wilt Associated Phytoplasma
- Agricultural Pest collections digitised and accessible on-line

4.2.4 Result Area Genetic Resources

NARI is the custodian of the Genetic Resources for Food and Agriculture diversity which is an important heritage and basis for food security and the advancement of commercial crop and livestock production in the country. This RA covers a range of core activities of NARI under the two sub-headings of Genetic Resources Management and Genetic Resources Use and Access.

Genetic Resources Management

Plant Genetic Resources

NARI is maintaining a number of PGR *ex situ* collections at its various regional centres. The maintenance is an on-going responsibility and the major aim is to conserve the accessions with the aim to use them in future crop improvement programs.

A focus in 2025 will be to ensure that all accession records for the PGR collections maintained by NARI are captured in the new GRIN-Global PGR information management system. This work include characterisation and re-characterisation of accessions, validation of records in the field. While continuing work on the existing collections of PNG major food crops (sweetpotato, taro, cassava, yam, banana), funding has been mobilised to start work on inventories of other crops with breadfruit and kava a focus for 2025, as well as work on improved conservation of Banana Crop Relatives through seed.

Another focus related to the management of PGR collection is the development of Standard Operating Procedures to be used for the field collections maintained by NARI. This work is also closely related to the development of SOPs for the field multiplication of planting material for dissemination to stakeholders.

Animal Genetic resources

The area of animal genetic resources has so far not received much attention in NARI. However, work has started to characterise the various village chicken eco-types present in PNG and produce relevant technical and scientific publications to document this work. The first two studies will conclude in 2025. Other focus remains on the maintenance of breeding stock of small livestock at NARI Centres.

International and national partnership on GR

NARI will be honouring reporting requirements as part of PNG's international obligations as signatory to international treaties and membership with FAO Commission on PGR. This will include

the strengthening of partnerships with other PNG NARS organisations that are maintaining PGR collections through better communication, exchange of information and knowledge events.

Genetic resources use and access

In 2025, NARI will also start to do more work on the evaluation of vegetable varieties starting with a range of bean species but also tomato, cucumber and other vegetable crops. The Institute is focusing on open-pollinated varieties in order to support a more informal seed system that will allow farmers to save and re-use their own seeds.

The other important area that NARI is focusing on is the improvement of access to quality foundation planting material and breeding stock. The aim in 2025 is to develop SOPs on production of foundation planting material and breeding stock of chicken, poultry, sheep and goats.

NARI recognises the abundance of fruit and nut genetic resources in the country and is actively investigating and exploring the economic opportunities for commercial production with Galip Nut as the flagship investment. A key for any research work on tree species are suitable facilities such as budwood gardens, nurseries and other field infrastructure. NARI has mobilised funding through the Capital Investment Program of the PNG Government and aims to build capacity in tree crop research for development with establishing or improving facilities at NARI centres as well as building staff capacity to support this work.

Key outputs from RA 6 Genetic Resources

- All PGR collections at NARI captured with a full set of accession and passport data in the NARI PGR information system based on GRIN-Global;
- Inventories on breadfruit, kava initiated;
- New rice and vegetable varieties available to stakeholders;
- Fact sheets on village chicken eco-types published;
- Infrastructure improved to produce, process and store annual and perennial crop planting material safely at NARI Centres;
- Infrastructure and facilities to improve the production of breeding stock at NARI Centres;
- Reports to FAO Commission on PGR and ITPGRFA submitted in timely manner;

4.3 Priority 3 Nutritious Food and Healthy Diets

Priority 3 is covering the contribution that NARI will make in addressing the serious systemic problem of malnutrition in the country. There are important linkages between agriculture and nutrition. This priority has one Result Area with two sub-objectives that NARI will be contributing to with relevant interventions.

Much of the current work under this priority was supported by a grant from the GoPNG CIP, which has now been discontinued. There are no immediate activities planned for 2025. NARI continues working with partners in Provinces and Districts to improve breeding stock supply to increase local production of small livestock and a diverse range of food crops.

5. Communication 4 Change

Communication for Change is a critical process to scaling research outputs. In 2025, NARI will continue to manage partnerships, informing different stakeholders and increasing their knowledge

and understanding of innovations in AR4D but also receiving feed-back from the different stakeholders. In 2024, NARI took up the challenge to revive the PNG Journal of Agriculture, Fisheries and Forestry (JAFF) and the Harvest Magazine. The first volume of the JAFF is anticipated to be published in the first half of this year. This will offer PNG Scientist a great opportunity to publish their work. The revival of an Agricultural Information System is another initiative that will continue to be implemented in 2025 with the funding support from the GoPNG CIP that is helping to digitise historical agricultural publications, reports currently only available in hard copies.

Key outputs from “Communication for Change”

- Publication of the first volumes of *Journal of Agriculture, Forestry and Fisheries* and *Harvest Magazine*
- Partnership established with other NARS for contribution to the NARI Information System
- Agricultural Innovations Show 2025
- Updated information resources supporting scaling of research outcomes
- Active engagement with GOs and NGOs on upskilling of extension workers and increasing access to technical information on crop and livestock production;

6. Technical Services

As part of the delivery of technical services supporting scaling of research outcomes, capacity building and up-skilling of partners and extension providers with new or improved agricultural technologies and practices will continue to be offered on needs basis.

Other important services include the provision of analytical and diagnostic services from NARI’s Chemical Laboratory, the National Agricultural Insect Collection and information services that include access to scientific, technical, socio-economic databases that NARI is maintaining.

Key outputs from “Technical Services”

- Maintain the shared Tissue Culture facility at Aiyura
- Build capability of the NARI Chemistry Laboratory
- Development of Data collection to inform research directions
- Management of e-library, Agricultural insect pest and Plant disorders databases

7. Strengthening Institutional Efficiency and Effectiveness

As pointed out in the SIP 2022-2026, achievement of expected results by NARI cannot happen without a solid foundation of structures, systems and adequate resources. The critical areas remain as follows:

- The chronic under-funding of the Institute and support for delivery of AR4D, the need for diversification of income sources for the Institute and raising of the recurrent funding levels;
- The on-going need to manage change and promote changes in mindsets, attitudes and perceptions on what constitutes agricultural research and the role it plays in a system;

- Changes in the role of NARI regional centres from a research station to a multi-functional centre demonstrating best agricultural practice and serving as hubs for scaling of agricultural innovations;
- Changes in mobilising multidisciplinary and cross-organisational teams to address AR4D challenges and opportunities.

There are a number of major policy reviews and revisions planned that are important for setting future directions in the Institute.

a) The NARI Act from 1996 has not been reviewed since it was first passed by Parliament the same year. It was deemed necessary for the Institute to remain relevant and responsive to the changing needs of the agriculture sector. The review was initiated towards the end of 2024 and it is anticipated that recommendations for any amendments will be available in the second quarter of this year.

b) The organisational restructuring exercise to a) ensure that the Institute has an organisational structure that can deliver the SRF II, SIP and Annual Plans, and b) to comply with requirements under the public service framework so NARI gets the required allocation for the necessary workforce in the annual budget appropriations.

c) A review of the remuneration framework - the NARI remuneration framework is not competitive anymore against sister organisations such as Universities and it has been difficult to attract and retain qualified scientific staff.

c) A review, revisions or updating of NARI Management Standards as all Standards are out-dated and have not been reviewed in the past 20 years.

7.1 Advocacy and Visibility

As mentioned already above in Section 2.1.1, NARI is taking lead on request by the Minister for Agriculture and NARS organisations in facilitating the development of a NARS policy framework that is aimed at creating various policy instruments to bring about greater cohesion among NARS in contributing to the implementation of the NASP. This may include a policy forum to allow for evidence based discussions and preparation of policy papers to inform GoPNG, a competitive funding mechanism for accessing research grants and a portfolio of activities of common interest that would allow for better use of resources especially scientific staff, eg. in the area of data collection, genetic resources management, land use recommendations etc.

7.2 Diversifying Funding Sources

NARI will continue to develop proposals and submissions for consideration by national and international donors. The above opportunity arising from the NARS policy framework development is part of such efforts. There are other discussions happening at national level through the Research, Science and Technology Secretariat that NARI will be contributing.

In 2024, NARI had the opportunity to sign a partnership agreement with the Jiangsu Academy of Agricultural Sciences, China. This partnership includes capacity building of NARI staff, major development at the SRC Laloki for rice research and production, new office, laboratory and field infrastructure as well as collaborative research between NARI and JAAS scientists. Infrastructure development will start in 2025 with the erection of a new office building at SRC Laloki.

7.3 Investing in Human Talents

Human Talents are the most valuable resource for any institutions. Current staff capacity is well below the necessary critical mass to respond to the broad research mandate. A major effort in 2025 is needed to complete the restructuring exercise that started in 2024 with the submission of the list of established positions for the new structure. However, NARI's remunerations packages have dropped well below its sister organisation Unitech that is considered as benchmark for NARI. This needs to be addressed with urgency and a submission made to DPM/SCMC in time for consideration in the 2026 budget.

Overall, NARI has a well developed HTMD system. However, this has not been reviewed and updated for the past 20 years and systems and processes are outdated and have been partly superseded by management decisions and practices. All management standards need to be reviewed and revised to capture any changes and adapt to changes in structure, strategies and current best-practice HT management. Such work includes the updating of position descriptions, duty statements, performance indicators and performance management systems.

7.4 Management of financial and material resources

The implementation of the AIP 2025 is supported by the grants given to the Institute from the GoPNG recurrent and development budgets, project grants from national and international donors as well as minor income from internal revenue generating activities. The 2025 Income and Expenditure Plan is presented in Annex 5. While the recurrent and CIP budget appropriation has more or less remained at the same level as in 2024, the funding situation remains insufficient to address all needs of the Institute and for NARI to deliver on its mandated functions. The new Accounting software introduced in 2025 is anticipated to improve financial management and monitoring significantly once it is fully operation at the end of quarter 1.

Otherwise, with the support of the CIP Infrastructure support, NARI will further develop research infrastructure across its five regional centres.

Key outputs for improving institutional efficiency and effectiveness

- Bill drafted with amendments to the NARI Act 1996 as necessary for submission to Parliament
- Organisational structure with full documentation on positions and its functions implemented
- Proposal for adjustments to remuneration packages approved through Council and SCMC and captured in the 2026 Budget Submission for recurrent budget allocation;
- Priority NARI Management Standards reviewed and revised and new Standards developed for arising areas of need;
- Key research and farm infrastructure developed at NARI Centres
- Online leave and assets management system operating;
- New Accounting Software operating across NARI Centres

Annex. 1 Contribution of the NARI Strategy and Results Framework

Contribution to the long-term vision, mission and objectives of the National Agricultural Sector Plan

NARI SRF 2022-2031 NARI Vision Prosperous PNG Agricultural Communities	NASP 2024-2033 NASP Vision Empowered healthy and prosperous agricultural communities in a food secure Papua New Guinea
NARI Mission Promoting innovative agricultural development in PNG through scientific research, knowledge creation and information sharing	NASP Mission Transform PNG's Agriculture through Productive Partnerships, Innovation and Sustainable Entrepreneurial Farming Systems and Value Chains
NARI Strategic Objective Enhanced productivity, efficiency, stability and sustainability of the smallholder agriculture sector	NASP Goal To stimulate growth in the agriculture sector
Targeted Development outcomes <ul style="list-style-type: none"> • Increased incomes and employment in rural areas arising from increased economic activities and business development • Enhanced stability and resilience of livelihood systems of rural households and communities • Production, productivity and efficiency of crop and livestock products increased and producers better linked to profitable markets at scale • Rural and urban households consuming healthy balanced and nutritious diets • Improved standards in Food and Feed safety in agricultural production and food/feed use are applied • Enhanced and equitable benefits from agri-ecosystem goods and services • Agricultural production systems are sustainably managed under changing climates and macroeconomic drivers 	Targeted Development outcomes <ul style="list-style-type: none"> • To improve food security, nutrition and health • To increase income earning opportunities for population dependent on agriculture • To reduce imports of food, rice and grains, meat and poultry and increase exports • To improve agriculture sector performance through effective coordination between all agencies at all levels • To create employment opportunities for all, including youth and women in PNG • To improve the quality of population in rural villages and transform into economically vibrant communities

Annex 2. List of currently implemented projects and studies in 2025

No.	Project Code	Name of Project/Study	Funding Source	Donor Code	Total Budget	Lead Officer	NARI Centre	Start date	End date
1	A10224	Agro-morphological Characterisation of PNG Highlands Sweetpotato Germplasm for Establishment of Core Collection and their Conservation	NARI Research fund	A10224	K 38,527	Boney Wera	HRC	01/01/2022	30/06/2025
2	A10225	Responding to emerging pest and disease threats to horticulture in the Pacific islands	ACIAR	HORT/2016/185	AUD 179,719	Robert Geno	HRC	01/01/2020	31/03/2025
3	A10226	Sustaining soil fertility in support of intensification of sweetpotato cropping systems Phase II	ACIAR	SLAM/2017/041-SMCN/2012/105	AUD 955,991	William Sirabis	HRC	02/05/2022	31/03/2025
4	A10237	Growth response of pathogen-tested sweetpotato cultivars to nitrogen application methods in Highlands agro-ecological zones of Papua New Guinea	APSF	APSF23022	A\$36, 580	William Sirabis	HRC	01/07/2023	30/06/2026
5	B40329	Climate Smart Agriculture opportunities for enhanced food production in PNG	ACIAR	ASEM/2017/026	AUD 624,059	J.Pakatul	MRC, HRC, IRC	01/06/2019	31/03/2025
6	B40337	Determination of optimum plant spacing of taro cultivars	NARI Research fund	B40337	K 6747	P. Seta-Waken	SRC Laloki	01/01/2025	31/03/2026
7	B40338	Development of Application of Genetic Resources in Papua New Guinea Using Phylogenetic Analysis of Indigenous Bananas and Rice	Japan Society for the Promotion of Science		US\$80,000	J. Paofa	SRC	01/06/25	31/12/28
8	HQ40214	PIP Infrastructure Development Program	PIP	562-3101-1-23399	K16,000,000	Thomas Omot	MRC	01/01/2023	31/12/2025
9	HQ40215	Better soil and land information for improving PNG's agricultural production and integrated land use planning - building a revitalised PNGRIS2	ACIAR	SLAM/2019/106	A\$76,907	Mark Tinah	MRC	01/04/2023	31/08/2026
10	K10008	Characterising productivity of village chicken eco-types under free-range semi-intensive management systems in Kerevat, Papua New Guinea	Funded from R4D funds	n/a	K20, 000	Fred Besari	IRC	15/07/2023	15/07/2025
11	K1006	Enhancing private sector- led development of the canarium industry in PNG (Phase II)	ACIAR	FST/2017/038	AUD 856,638	Dalsie Hannet	IRC	01/12/2019	30/06/2025
12	K1007	Behavioural response of Canarium weevil, <i>Ectatorhinus magicus</i> , to host-	ACIAR	FST/2017/038	K26,024	J. Yombai	IRC	01/06/23	01/06/2025

		plant volatiles.							
13	K1009	Testing bio-conversion efficiency of Black Soldier Fly Larvae on Galip Pulp and Cocoa Pod Husk under Tropical Lowland Islands Region	PIP R&D		K44,300	Fred Besari, Jacob Yombai	IRC	15/03/24	15/06/2025
14	L10025	Assessing the effectiveness of Grow Hariap Foliar Fertilizer (GHFF) in managing crop productivity relative to conventional fertiliser practices.	NARI Research fund	L10025	K 35,823.40	Philmah Seta-Waken	SRC & MRC	01/11/2021	31/12/25
15	L10031	Raising the profile of breadfruit production in coastal and island food systems in PNG	ITPGRFA BSF	PR-59-S-PNG/2024	K926 271.68	P. Seta-Waken	SRC/MRC/IRC	10/04/2024	09/04/2028
16	L10032	Yield data evaluation of common Kalapua bananas grown in the Central Province	PIP R&D		K24,558	Dickson Benny	SRC Laloki	01/06/24	01/07/2027
17	L10033	Yield and agronomic data evaluation of Taro, Sweet Potato, Cassava and Corn grown and distributed at SRC	PIP R&D		K 14,461	Dickson Benny	SRC	01/11/24	01/11/2026
18	L10034	Evaluation of less-labour intensive yam propagation techniques with improved agronomic practices for high yield production	PIP R&D		K 22,500	P. Seta-Waken	SRC	01/06/24	01/06/2026
19	L10035	Amaranth diversity evaluation of agronomic traits (Phenotyping) in Laloki conditions	PIP R&D Gen Res		K 31,312	P. Seta-Waken	SRC	01/09/24	01/09/25
20	L10036	Grand Challenges: SE Asia bananas - Papua New Guinea	M&B Foundation	INV-080024	K178,070.00	J. Paofa	SRC	01/12/24	31/05/27
21	T20330	Investigating the epidemiology and economic impact of the African Swine Fever (ASF) in Tambul, WHP	NARI Research fund	T20330	K 35,500	Stanley Amben	HARC	01/02/2022	30/06/2025
22	T20331	Strategies to alleviate ascites in broiler chicken production in the high-altitude areas of Papua New Guinea (PNG).	PIP Livestock	T20331	K 13,980	J. Ahizo	HARC	01/03/2022	31/03/2025
23	T20332	Assessing the baseline productivity of native chickens from different ecotypes adapted to highlands conditions.	Funded from R4D funds	n/a	K20, 000	Jeremiah Ahizo	HARC	15/07/2023	15/07/2025
24	T20333	Assessing the growth, yield performance and other traits of the promising Wheat cultivars at HRC/HARC	NARI Research fund		K23,499	J. Anton/S. Amben	HARC	15/11/23	31/03/2025
25	U10019	Holistic training, baseline surveys and partnership development for Black Soldier Fly farming in PNG	ACIAR	LS/2024/144	A\$174,720	A. Roberts	MRC	01/01/25	31/12/26

Annex 3. Expected Results in 2025 from implementation in RAs

Table A3a: Priority 1 - Expected outputs in 2025 against Result Area Priorities in Result Areas 1 and 2

Result Area/Targeted Output in SIP	Outputs from projects/studies to be delivered in 2025	MOV	Lead Officer or team/ Implementation Centre(s)/Project Code
Result Area 1 – Foresighting and Advocacy			
Information on future research needs and partnerships in policy analysis and data-driven investment opportunities;	NARS policy framework developed for better cohesion of and collaborations between NARS organisations	Policy document	DG office
Relevant databases on research investment, and other agricultural data and information developed and maintained	Database established in NARI capturing relevant information and data	Database records	M&E, Information systems officer
Information on economic feasibility for selected crop and livestock for large scale farming (breadfruit, taro, yam, tropical and temperate fruits and nuts etc.)	Economic assessments on sago, taro, betel nut, marita, breadfruit, kava, apples	Information bulletins	TBA PIP R&D
Result Area 2 – Value Chain Support - Value chain innovations for priority crops and livestock			
Information and technology package on small scale commercial production of root, tuber and banana crops	Recommendations on soil management in SP systems in PNG Highlands released	Scientific and Technical Publications	W. Sirabis, Yapo Jeffrey/HRC/A10226
	Extension Booklet on options of farm by-products as nutrient source in SP systems		
	Information on economic benefit of the use of locally available fertilisers in vegetables, corn and sweetpotato available		P. Seta-Waken /SRC /L10025
	Targeted research interventions supporting commercial taro and rice production planned and resourced		MRC and SRC teams
	Information and technology package on small scale mech-	Technical	MRC, HRC, HARC

	anisation options for root and tuber crop and rice produc- tion and processing	publications	
Gaps in availability of guidelines, proto- cols and systems for production of certi- fied planting material of taro, sweet- potato, potato and banana addressed;	Information and Technology package on potato Rapid propagation technique available to stakeholders	Technical Report/ Extension Bulletin	TBA
	Protocols for tissue culture propagation for 3 diploid ba- nana types developed	Technical report/ Scientific publica- tion	J. Aidaboe/MRC
	Quality taro planting material SOP	SOP document	TBA
	Rapid taro propagation methods assessed for efficiency and cost	Technical publica- tion	TBA
Specific innovations in target value chains made available to actors in the value chains as part of scaling process	PT varieties produced and supplied according to demand;	PT production and sales records	NARI TC lab Aiyura (Technical Ser- vices)
	Quality Potato plantlets supplied as per agreement		
Result Area 2 – Value Chain Support – Galip value chain			
Commercial viability of business models at different scales for galip nut pro- cessing improved;	Information package on improved production and processing practices, lessons learnt on building a sustainable Galip Nut Value chain;	Final project report	Project partners/IRC/K1006
Advocacy and Awareness on Galip pro- duction	Documentation of key achievements of NARI’s investment into Galip value chain development, repository of publications available on a Galip Nut webpage on the NARI website;	Website records	TBA
Result Area 2 – Value chain support – Black Soldier Fly Farming			
Baseline information on insect-based farming opportunities and production	<ul style="list-style-type: none">Knowledge on farmer and consumer perception on insect-based feedPolicy recommendations in support of BSFL enterprisesregional/international collaboration frameworkVolume, type and seasonal availability of waste sources documented	Technical and Pro- gress reports	A. Roberts, F Besari/MRC, IRC/ U10019
	<ul style="list-style-type: none">Information on bio-conversion efficiency of Black	Technical report	F. Besari, J. Yombai/IRC/K1009

	Soldier Fly Larvae on Galip Pulp and Cocoa Pod Husk		
	<ul style="list-style-type: none"> Information on use of BSFL as low cost protein source to supplement diets in village chicken 	Technical report/ Publication	A.Roberts/MRC/U10014
Economic feasibility assessments	<ul style="list-style-type: none"> Business model and scaling options for BSFL enterprises key economic thresholds and profit margins potential GHG emission reduction using BSFL assessed 	Technical and Progress reports	A. Roberts, F Besari/MRC, IRC/ U10019
Research capacity for BSFL enterprise re-research developed	<ul style="list-style-type: none"> Design for BSFL rearing facility processing facility for larve and frass developed expertise in BSFL farming developed 	Progress reports, Trip reports, Training reports	A. Roberts, F Besari/MRC, IRC/ U10019
Result Area 2 – Value chain support – Mini Feed Mill Adoption			
Scaling of mini feed mill technology	<ul style="list-style-type: none"> Supply chain options for feed formulation and mill profitability identified 	Technical report	TBA

Table A3b: Priority 2 - Expected outputs in 2024 against Result Area Priorities in Result Areas 3 – 6

Result Area/Targeted Output in SIP	Outputs from projects/studies to be delivered in 2024	MOV	Lead Officer or team/ Implementation Centre(s)/Project Code
Result Area 3 – Household resilience – Climate Smart Solutions			
Diversified climate resilient portfolios of crop varieties and species as well as live-stock strategies and technologies adapted to climate risks available to stakeholders;	Promising NERICA rice varieties selected;	Technical report/ Publication	P. Seta-Waken/SRC/L10024
	Improved wheat varieties identified for farmer assessment	Technical report	Project completed
Scaling approaches applied for wider awareness and adoption on use of climate smart innovations in target areas;	Networks extension agents in vulnerable districts in climate smart use of agriculture production technologies and practices managed and expanded	Quarter and Annual reports	J. Pakatul, J. Ahizo, F. Besari, P. Seta Waken, M. Sine

	Information on the investment in climate change adaptation measures and achievements by NARI in the past 15 years	Technical report	K. Kama, R. Sabub
	Information and Technology package of climate change adaptation measures in PNG	Technical report and publication(s)	TBA
Result Area 3 – Household resilience – Disaster Response			
Sufficient quality planting material and breeding stock available as foundation material for rehabilitation after disaster events;	Key agricultural rehabilitation crops and processes in place for deployment in disaster situations;	Quarterly and Annual reports	Centre Managers
	Emergency response seed kit developed	Technical report	TBA
Weather data available from all NARI Centres to stakeholders	Weather data captured from the AWS at all Centres and captured in central database	Data base records	E. Kupe, Centre Managers
	National Climate forecast information sharing platform;	Web record / Technical report	R. Baiga, E. Kupe/ MRC, HQ/B40329
Result Area 4 – Agro-ecosystem resilience			
Benefits of alternative agricultural production systems assessed	Demonstration blocks of integrated agroforestry systems featuring breadfruit established by NARI and partners	Progress reports	P. Seta-Waken/SRC, IRC/L10031
Result Area 5 – Biosecurity – Management of Biosecurity Threats			
Fall Army Worm Management Package and associated information available and capacity built for use by different stakeholders;	Information on FAW baseline sensitivity for pesticides used in control and efficacy under lab conditions;	Technical report/ Publication	R. Geno/HRC/A10225
	Information on presence and identity of FAW natural enemies in selected areas in PNG	Technical Report/ Publication	
Additional environmentally safe options available to vegetable producers for effective management of Diamond-back moth;	Information on Diamond Back moth baseline sensitivity for novel insecticides (BT and others) and information on efficacy of two best performing insecticides;	Technical Report/ Publication	R. Geno/HRC/A10225
Effective management strategies of Banana-associated phytoplasma in affected areas in Morobe and Madang;	Information on spread of BWAP in the Markham Valley;	Technical reports/ scientific publications	G. Rauka/MRC/B40323
	Information on vectors involved with transmission of BWAP in the Markham Valley		
Relevant information on other pest and disease management issues	Management strategies for ascites in broiler chicken in the Highlands of PNG	Technical Report	J. Ahizo/HHRC/T20331
Result Area 5 – Biosecurity – Biosecurity Preparedness			

Contribution to data bases developed for pest alert and incursion threats by NAQIA for stakeholder advise and planning.	Specimen in the NAIC maintained and 500 specimen digitised in an electronic database;	Quarterly and Annual report	NAIC Curator/Technical Services
	Access to CABI PlantWise on-line resources integrated in NARI online resources		G.Rauka, R.Geno, E.Kupe
Pest & Disease diagnostic capacity increased in supporting the sector;	Plant Doctor training conducted for NARI and other NARS staff and applied in pilot Plant Clinics	Progress reports	G. Rauka, R. Geno,/CABI support
Result Area 6 – Genetic Resources – Genetic Resources Management			
Information on GRFA is available to stakeholders in PNG and international community;	Information on phenotypic diversity of local Amaranth accessions at SRC Laloki	Technical Report	P. Seta-Waken/SRC/L10035
	Fact sheets on poultry breeds kept at NARI	Publication	F. Besari, IRC; J. Ahizo, HARC/K1008, T20332
	New accessions for taro, yam and winged bean collected from Madang, Simbu, WHP, Jiwaka characterised and documented	Technical progress report	C. Walter, A. Samson/MRC, HRC
	GRIN-Global PGR information system installed and operating in NARI	PGR database records	J. Paofa, SRC and PGR curators
New PGR collections established, current collections expanded, inventories established	Breadfruit collection expanded and characterisation data established	Technical progress reports	P. Seta-Waken, J. Paofa/SRC, MRC, IRC/L10031
	Kava genetic resources collected and chemically characterised		TBA
Germplasm of root and tuber crops, fruits and nuts, rice, wheat, maize, OP vegetable seed, spices maintained for further research and development purposes with minimum losses;	All PGR collections in NARI are documented with basic passport data and other pre-breeding information as available;	Records in the database; field maps and plan	J. Paofa, and PGR curators
	all PGR collections are numbered with respective accessions numbers in the field and field plans available;		
Breeding stock of village chicken, cross-breeds, ducks, goats and pigs maintained at NARI centres;	Data base of livestock GR set up;	Data base records	J. Ahizo, L. Gam, MRC and breeding stock managers
	Chicken and duck breeds characterised;		
Management of international GRFA Agreements and conventions (ITPGRFA and CPGR FAO)	Annual report on status of PGR collections in PNG submitted to CPGR FAO against SDG indicators;	Compliance reports; meeting minutes; SMTA records	B. Komolong, J. Paofa, PGR curators;
	SMTAs signed for supply of PGRFA to external collaborators;	SMTA records	

	PNG representation in regional and international PGRFA working groups and networks;	Meeting reports	
	Dialogue established with CEPA, DAL and other stakeholders on management of international agreements and treaties through domestic policies and legislation;	Meeting reports	
Result Area 6 – Genetic Resources – Genetic Resources Use and Access			
Improved rice and corn varieties released;	New corn varieties introduced and multiplied for evaluation	Progress reports	TBA
Standard operating procedures operating in all NARI centres for production of foundation crop planting materials and breeding stock;	Standard operating procedures for PGR collection maintenance and seed production	SOP document;	TBA
Facilities, equipment and infrastructure in place for production and post harvest processing and safe storage of seed and planting material at NARI centres	Multipurpose shed incl seed processing set up at MRC, IRC	Photo records, quarterly and annual reports;	T. Omot,G.Siki/MRC/HQ40214
	Seed handling system at HARC, HRC, MRC SRC IRC	SOPs	TBA
Established nurseries and bud-wood trees for new introductions and domesticated fruit and nut crops with commercial potential.	Priority fruit and nut trees for supply to stakeholders identified and sources of planting material supply identified	Study report	TBA/PIP R&D
	Nursery infrastructure established or improved	Photo records, quarterly and annual reports	T. Omot and Cms/HQ42014
	Vanilla shade house established		N.Bokame, PIP R&D
Facilities, equipment and infrastructure in place for improved supply of breeding stock at NARI Centres;	MRC new piggery/aquaculture integration	Photo records, quarterly and annual reports	T. Omot, G. Siki/MRC/HQ40214
	Poultry sheds at SRC and IRC upgraded	Photo records, quarterly and annual reports	T. Omot, G. Siki/MRC/HQ40214
	MRC power upgrade	Photo records, quarterly and annual reports	T. Omot, G. Siki/MRC/HQ40214
Stakeholders access to and supply with	NARI internal system developed to capture production and	Production and Dis-	J. Maima, R. Miti, N. Bokame, TBA

quality breeding stock and planting material of priority crops and varieties improved;	distribution of breeding stock and planting material and baseline established	tribution records;	
--	---	--------------------	--

Table A3c: Priority 3 - Expected outputs in 2025 against Result Area Priorities in Result Area 7

Result Area/Targeted Output in SIP	Outputs from projects/studies to be delivered in 2023	MOV	Lead Officer or team/ Implementation Centre(s)/Project Code
Result Area 7 – Nutritious Food and Health – Improved Diets, Advocacy on safe and nutritious food			
No activities and outputs planned for 2025			

Table A3d: Expected outputs in 2025 in Cross-cutting Areas

Result Area/Targeted Output in SIP	Outputs from projects/studies to be delivered in 2024	MOV	Lead Officer or team/ Implementation Centre(s)/Project Code
2.4.1 Communication for Change			
Events organised enabling exchange and sharing of insights into lessons learnt from R4D interventions among stakeholders and policy makers;	Annual Innovation Show 2024	Photos, media reports	J. Laraki,, HQ NARI Centres
	Participation in regional shows and exhibitions (Goroka Show, Morobe Show, World Food Day etc.)		
Scientific, technical and general information accessible from on-line and other media platforms;	Seasonal Farm Advisories – EHP Pilot SMS / social media	Web posts, SMS posts, progress reports	J.Pakatul CSA
	Updated ADD GIS	ADD maps	M.Tinah, Research staff
	Revitalised PNGRIS2 delivers to users.	Progress reports	M. Tinah, HQ, W. Sirabis, HRC/B40215
	Increased number of records available through Online platform to the information database	Records available through platform	E.Kupe, I.Okpul/HQ PIP R&D
	Ongoing updating and increased access of stakeholders to records in the National Agricultural Information System;	Database records	I. Okpul, E.Kupe/HQ/PIP R&D
	Increased networking and contributions from NARS partners to the Information Database	Database records/ trip reports, workshop reports	I. Okpul/HQ PIP R&D

	Journal of Agriculture, Forestry and Fisheries Volume 1 and 2 published in 2025 Harvest Magazine Volume 1 and 2 published in 2025 5 Training packages developed 50 Toktok publications repackaged 10 Information Bulletins updated Video / Presentation / App formats developed Weekly publications in NARI Nius, mainstream media, social media	Publications	J. Laraki/HQ PIP R&D
2.4.2 Technical Services			
Stakeholders supported with efficient and affordable diagnostic and analytical services;	Increase numbers of sample submission and analysis compared to 2024	Laboratory records; quarterly and Annual reports	J. Kerage/Chemlab
	Reduction in chemical analysis sample turnover time compared to 2024		
	Capability of the lab increased with testing capacity for EtO and Vanillin established		
	Tissue Culture potato delivery targets met	Annual and Quarterly Reports	W.Maso/TC – Technical Services
	Digital database of agriculturally important plant disorders and insects in the NAIC established and physical records digitised as per workplan targets		G. Rauka, A. Agia/NAIC/PIP R&D

Table A3e: Expected outputs for 2025 in Result Areas addressing Institutional Efficiency and Effectiveness

Result Area/Targeted Output in SIP	Milestones in addressing critical areas in Institutional Management and Development	MOV	Lead officer/team
3.1 Results-based Management			
Policy and Strategy papers informing on policy interventions to strengthen and improve scaling of interventions	Integration of Master Farmer certification into TVET system	Discussion paper	B. Komolong, L. Fooks, DG office
Annual reporting	Annual report 2024	Documents, Council minutes	Directors, FC, MAP, HRM
Annual Corporate Implementation Plan	Annual Corporate Implementation Plan 2025 endorsed by Council in the first meeting 2025;	Council minutes	Directors, FC, HRM, MAP

	Annual Corporate Implementation Plan 2026 endorsed by Council in the last meeting 2025		
Institute M&E system – Stage I Basic capacity for M&E at project level	M&E monitoring matrix at NARI operational level and project management level established	Documents	K. Kama, R. Sabub
Internal Information system with on-line databases on research management, Finance, HT and Assets management	HT leave management system database operating;	Reports from the database	E.Kupe, K. Mazi, B.Samor
	Functions in the Research management database expanded to online reporting system;		
	Assets Management database operating;		
	Trip and activity report database		
	Enquiry tracking database		
3.2 Resourcing the Institute			
3.2.1 Advocacy and Visibility			
Avenues for increased level of advocacy and dialogue at policy level created	NARS Policy development (see RA 1)	Draft Strategy Document	Director level/DG office
	Public Relation Officer established		
NARI achievements presented in diverse media and its profile raised	Media articles (Radio, TV, Newspaper,);	Quarterly and Annual Reports	Info team
	Video clips; Social media posts; Press releases reporting on NARI key activities		
	NARI Overview Video revised		
3.2.2 Diversifying Funding Sources			
Annual cash flow plans for internal revenue activities completed and implemented	Business plan developed as foundation for NEL operationalisation	Document	Business Manager, DG office, Centre Managers
Active engagement with GoPNG and donors result in annual award of diverse research for development grants and funding support	new proposals submitted to donors;	Proposal documents	Directors, Scientists..
	Portfolio of research and capacity building activities supported by Jiangsu AAS	MOA, Progress reports	DG office, Directors
3.2.3 Investing in Human Talents			
Human Talent Management and Development Strategy (HTMDS) developed	Restructuring plan approved by SCMC and requirements incorporated in 2025 Budget submission	relevant council submissions;	HRM and HTDMC Chair, DG, Council
	Benchmarking of NARI remuneration framework and im-	Council/SCMC sub-	

	proved package approved by Council and SCMC for re-sourcing in 2026	mission	
	Review and revisions to position designations, career path progression completed and submitted to Council for endorsement;	Council submission	
Performance based Appraisal system operating	Staff Annual Workplans submitted through rank and file by set deadlines;	Workplan records	HRM, all staff
	Annual PDR review time table implemented	PDR records	
	Contract Review PDR process applied in timely manner	Contract renewals on time	
On-line HT Management system operating	Leave management system operating	Leave records	HRM, E. Kupe
Cadetship Program operating	Cadetship Program fully scoped with resource requirements;	Program Documents	Director General, DDG, Directors
	Administrative processes and learning materials in place;	Manuals, formats, Management policies	
3.2.4 Management of financial and material resources			
Finance management system in NARI improved with online access to reporting and project management information	New Accounting Software operational across NARI Centres;	Progress reports	A,Amoi, C. Mathew,
Medium-term assets and facility management and development plan developed and annual targets met	Online fixed assets management register	Reports, Meeting minutes, maps,	T. Omot, J. Gagau, E. Kupe
	NARI land use mapping and zoning plan used for land management and planning		T. Omot, M. Tinah, Centre Managers
	Field research area mapped, demarcated and land use history database developed in all Regional Centres		Centre Managers, T. Omot, M. Tinah
Capital Investment and new infrastructure development	Multipurpose buildings at MRC, IRC completed	Progress reports, photos	T. Omot, G. Siki/HQ
	Laboratory infrastructure at SRC upgraded and equipped		
	Agronomy laboratory building at MRC completed		
	Rice Research Infrastructure development plan for SRC completed and resourced;		
	other key Research Infrastructure activities as per PIP 2024 plan completed;		

	Fencing at MRC completed		
	Single Officer Quarter upgrade and renovations at MRC, Guesthouse upgrade HRC,		
	New Infrastructure development supported by Jiangsu AAS/ China Aid Phase I completed (new office complex)		
NARI land resources secured with title and ownership ascertained	Removal of settlers from SRC – court action progressed	Progress reports	T. Omot, DG office
3.3 Governance, Policies, Processes			
NARI Act Review	Amendments to the NARI Act captured and submitted to the Minister for action	Council minutes; amended Bill document	Council, DG, Review team
	NARI Enterprise Ltd. Policy and Establishment/Business plan and resource mobilisation strategy	Council minutes	DG, Business Manager
Revised Organisational Structure at corporate level and regional centres in place	Restructuring plan implemented	Council minutes	DG office, HRM, Directors, S. Tobel
HT Management policies updated or developed	Training Policy and Guidelines, Terms and Conditions of Employment, Performance Management Policy revised and endorsed	Council minutes	HRM, Directors, S. Tobel
	Occupational Health and Safety Policy developed		
Management of financial and material resources policies	Housing estate management policy and strategy developed for NARI establishments	Management and Council minutes	DDG, T. Omot, Centre Managers
	Vehicle management policy reviewed and updated	Management and Council minutes	DDG, T. Omot
	Financial Management standard updated and submitted for endorsement by Council	Management and Council minutes	DDG, FC, Directors
	ICT management Policy developed and submitted to Council for endorsement	Management and Council minutes	DDG, Directors

Annex 4. NARI Income and Expenditure Plan 2025

ITEM	ACTIVITY	2024 Expenditure (Actuals to Nov)	2025 Budget
	Funding		34,884,300
1	Personnel Emoluments (Human Resources Costs)		
	Contract Staff - Aggregated costs	7,786,009	11,344,320
	Ancillary Staff - Aggregated costs	2,540,171	3,052,999
	SUB-TOTAL PE (HR) COST	10,326,180	14,397,319
2	HQ/Centre Routine Operation and Maintenance (ROM) ADMIN		
222	Travel&Subsistence- Accom,travel fares,TA,Veh Hire etc - Administration	649,035	598,970
223	Office Material&Supplies- Stationary, Cleaning supplies, consumables	125,221	130,000
224	Operational Materials&Supplies	315,958	330,000
225	Fuel-Veh Fuel/Oil/Lubricants & Genset	465,889	142,260
227	Other Operational Expenses	1,569,261	1,702,272
231	Utilities – Electricity, Teleph, Internet & Others	577,062	681,732
233	Routine Maintenance- Buildings - Offices, residential, OE, PEM, Motor Vehicles	628,806	868,040
251	Organisational Membership & Subscription	57,191	60,000
271	Machinery, Equipment, Fixtures/Fittings and Motor Vehicles - New/Replacements	887,077	700,000
Sub Total	Sub Total - Routine Operations and Maintenance	5,275,501	5,213,274
3	Technical Services		
222	Travel&Subsistence	18,477	290,000
223	Office Material&Supplies	36,485	50,000
224	Operational Materials&Supplies	441,992	1,180,000
225	Fuel-Veh Fuel/Oil/Lubricants	7,474	145,000
227	Other Operational Expenses	13,921	200,000
275	Equipment/vehicle - purchase / replacement	438,997	780,000
Sub Total	Sub Total - Technical Services	957,345	2,645,000
4	Research and Development Activities		
222	Travel&Subsistence	150,148	1,113,376
223	Office Material&Supplies	24,323	5,000
224	Operational Materials&Supplies	1,155,797	2,036,400
225	Fuel-Veh Fuel/Oil/Lubricants	10,905	421,950
227	Other Operational Expenses	68,733	500,000
275	Equipment/vehicle - purchase / replacement	1,223,385	2,478,374
	Sub Total - Research and Development Activities	2,633,291	6,555,100
5	Capital Formation and Infrastructure Development		
	Construction and Redevelopment of Institute Infrastructure	4,210,441	4,000,000
	Sub Total - Capital Formation, Major Repairs and Maintenance	4,210,441	4,000,000
	GRAND TOTAL	23,402,759	32,810,693



NARI Logo - The letters NARI are the initials of the National Agricultural Research Institute. The PEOPLE symbolise those included in the mandate of NARI such as farmers, researchers, extension agents, partners, NGOs etc., backed with **BLUE** to encompass the sky and the macro environment. The LEAF symbolises crops, backed with **GREEN** to depict the crop environment. The PIG and CHICKEN heads symbolise livestock. The **RED** background portrays the toil and sweat of the people.

Our international development partners play a key role in enabling the National Agricultural Research Institute to achieve its development objectives. The Institute gratefully acknowledges the generous support of our international partners.



Food and Agriculture
Organization of the
United Nations



Contact NARI

National Agricultural Research Institute

Sir Alkan Tololo Research Centre
P.O. Box 4415, LAE 411
Morobe Province,
Papua New Guinea

Phone: (+675) 4784000
Email: naripng@nari.gov.pg
Web: <https://www.nari.gov.pg>
e-library: <https://info.nari.gov.pg>



Promoting Excellence in Agricultural Research for Sustainable Development