

# NAMIBIA

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## KEY INDICATORS, 2001–2011

Total Public Agricultural Research Spending	2001		2008		2011
Namibian dollars (million constant 2005 prices)	111.0		109.2		184.0
PPP dollars (million constant 2005 prices)	26.0		25.6		43.1
<b>Overall Growth</b>		<b>-2%</b>		<b>69%</b>	
Total Number of Public Agricultural Researchers					
Full-time equivalents (FTEs)	71.9		81.0		89.4
<b>Overall Growth</b>		<b>13%</b>		<b>10%</b>	
Agricultural Research Intensity					
Spending as a share of agricultural GDP	3.11%		2.75%		4.27%
FTE researchers per 100,000 farmers	28.29		30.91		33.22

Note: Acronyms, definitions, and an overview of agricultural R&D agencies are available on page 4.

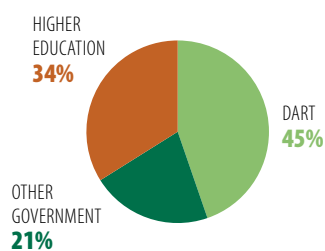
- ▶ From 2008 to 2011, human resource capacity in agricultural research increased only slightly, whereas spending grew by more than two-thirds, driven by higher levels of capital investments at DART and the Directorate of Fisheries.
- ▶ Only 13 percent of agricultural researchers held PhD qualifications in 2011, which is very low compared with other countries in Africa.
- ▶ The national government provided almost all of the funding for agricultural R&D between 2009 and 2011; private sector and donor funding were negligible.

## FINANCIAL RESOURCES, 2011

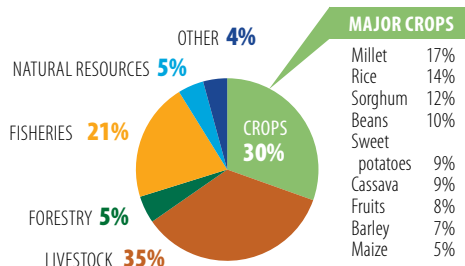
Spending Allocation	
Salaries	29%
Operating and program costs	35%
Capital investments	36%
Funding Sources	
Government	100%

Note: Shares are based on data for DART only.

## INSTITUTIONAL PROFILE, 2011



## RESEARCH FOCUS, 2011



Notes: Major crops include those that are the focus of at least 5 percent of all crop researchers; 7 percent of total crop researchers focused on vegetables and nuts.

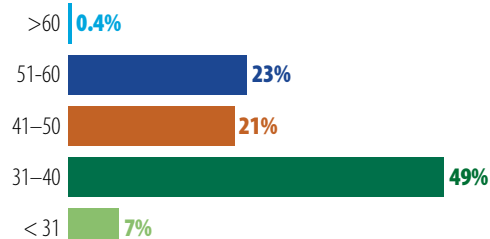
## RESEARCHER PROFILE, 2011



### Number by qualification (FTEs)



### Share by age group (years)



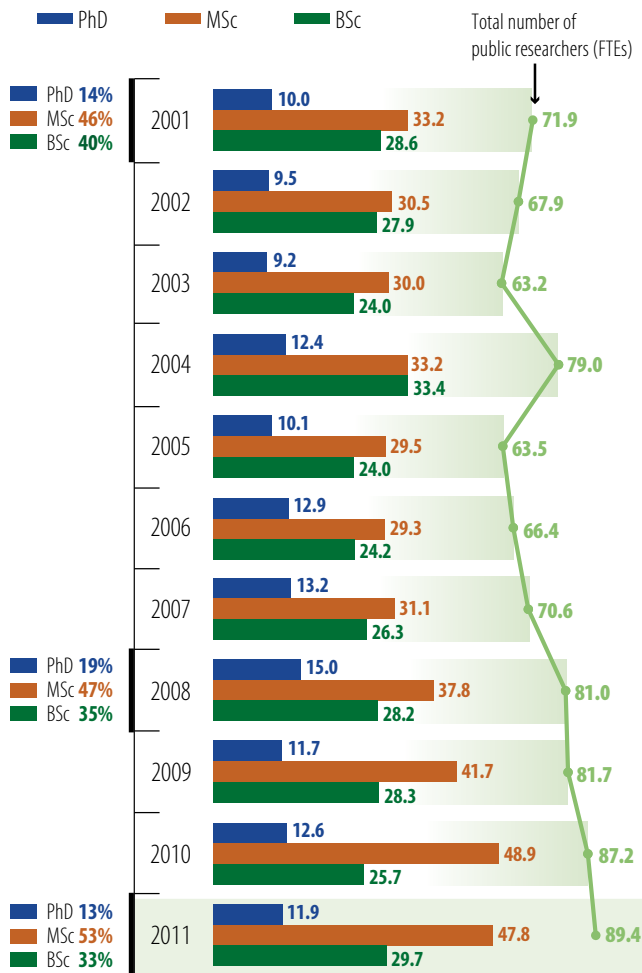
## CHALLENGE

- Namibian agricultural research agencies employ very few researchers with PhD degrees, and many of these researchers are nearing retirement. This situation stems from a lack of local PhD programs at the University of Namibia and the fact that research agencies, particularly DART, offer uncompetitive salaries and very limited promotional opportunities.

## POLICY RESPONSE

- The recent commitment of the government to restructuring DART and other ministerial technical directorates into a semiautonomous research institute (NARI) is a strong first step toward addressing DART's operating constraints. The new institutional status should allow for greater management flexibility in hiring and the ability to offer more competitive salaries.

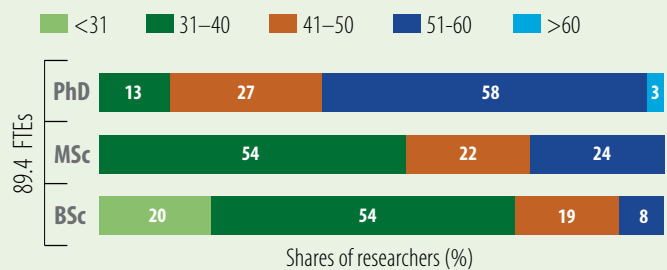
Total number of researchers by qualification level, 2001–2011 (FTEs)



Staff qualifications have fluctuated over time, but levels of researchers with PhD and BSc degrees changed little between 2001 and 2011. In contrast, the number of researchers qualified to the MSc degree level increased considerably, accounting for more than half of all researchers in 2011.

Three-quarters of researchers holding BSc degrees and more than half of those with MSc degrees were younger than 41 years of age in 2011. In contrast, over 60 percent of researchers with PhD degrees were over the age of 50.

Distribution of researchers by age bracket, 2011



## CROSS-COUNTRY COMPARISONS OF KEY INDICATORS

	Total number of researchers, 2011 (FTEs)	Growth in number of researchers, 2008–2011	Share of PhD researchers, 2011 (FTEs)
<b>Namibia</b>	<b>89.4</b>	<b>10%</b>	<b>13%</b>
Botswana	123.8	26%	20%
Malawi	162.3	41%	20%
Mozambique	313.6	22%	8%

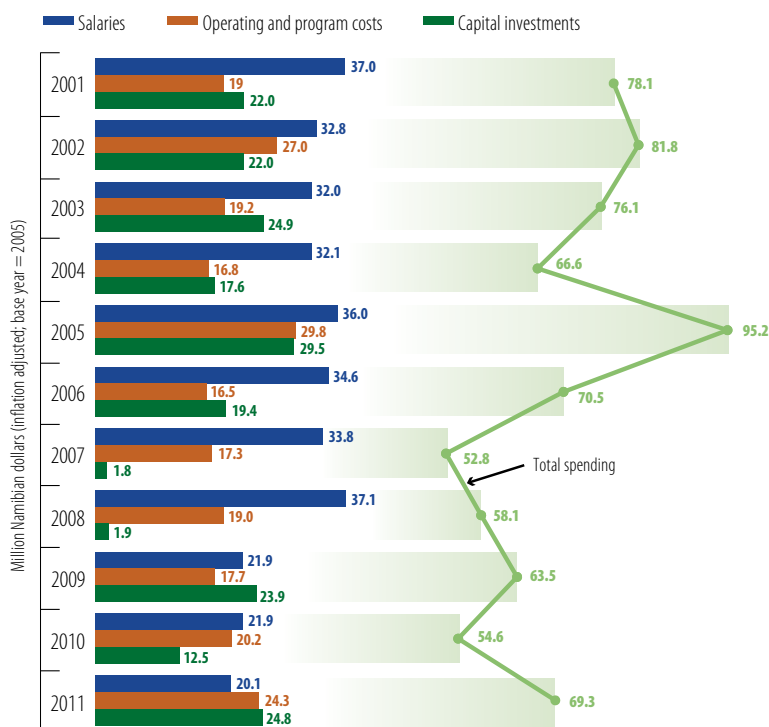
## CHALLENGE

- ▶ DART is entirely funded by the government through a disbursement process that often impedes long-term planning of agricultural research and the critical timing of certain research activities. DART generates some income through the sale of goods and services; however, these funds must be remitted to the Treasury.

## POLICY RESPONSE

- ▶ The semiautonomous status of the new research institute NARI will facilitate operating efficiencies which should help to improve the financial situation for research. NARI will be able to source funding through mechanisms that are not currently available to DART.

DART's spending by cost categories, 2001–2011



The overall cost of salaries at DART fell after 2008 because a number of senior researchers departed, and the number of positions for laborers was reduced. After cuts during 2007–2008, capital investments rebounded to prior levels. As of 2011, a capital investment project, such as housing construction at research stations, was ongoing in all but one region.

### ▶ RECENT POLICY DEVELOPMENTS

One of the recent developments in the national agricultural R&D system was the 2013 establishment of NCRST, as was directed by the National Policy on Research Science and Technology Act of 2004. NCRST is an umbrella body overseeing the nation's activities related to research, science, technology and innovation. NCRST is also mandated to develop a national program for these activities triennially. This initial process is well underway, and the program is expected to stipulate a national approach to research, science, technology, and innovation; address challenges and opportunities in national innovation systems; identify thematic research priorities; and outline monitoring and evaluation strategies. A competitive fund for research, science, and technology has also been established under NCRST.

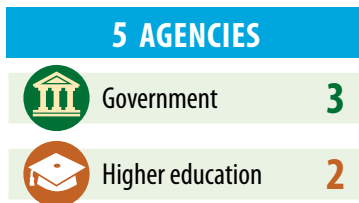
Other prominent developments in agricultural research relate to the establishment of NARI, the headquarters of which are currently in the first phase of construction. NARI will be created through a merger of DART with other technical directorates, research stations, training institutions, and analytical and diagnostic laboratories under the relevant ministry, MAWF. NARI is expected to execute all agricultural research activities currently conducted by MAWF, which will continue to allocate the necessary financial resources. Unlike DART, however, NARI will be a semiautonomous research institute with the freedom and flexibility to generate and retain income through the sale of goods and services, to source additional funding directly, and to access research grants. NARI will also have the flexibility to offer more competitive salaries, which hopefully enables it to attract and retain more highly qualified researchers.

## CROSS-COUNTRY COMPARISONS OF KEY INDICATORS *continued*

	Total spending, 2011 (million 2005 PPP dollars)	Overall spending growth, 2008–2011	Spending as a share of AgGDP, 2011
<b>Namibia</b>	<b>43.1</b>	<b>69%</b>	<b>4.27</b>
Botswana	17.5	-27%	2.44
Malawi	34.3	110%	1.03
Mozambique	20.7	14%	0.36

## OVERVIEW OF NAMIBIA'S AGRICULTURAL RESEARCH AGENCIES

Five agencies conduct agricultural R&D in Namibia. The main government directorate, DART (employing 40 FTEs in 2011), accounts for almost half of the country's agricultural researchers (in FTEs) and holds a broad mandate to conduct crop and livestock research. DART comprises 12 research stations and is administered by MAWF. The other two government agencies are the Directorate of Fisheries (15 FTEs in 2011) and the Directorate of Forestry (4 FTEs). Two higher education agencies conduct agricultural research: the Faculty of Agriculture and Natural Resources at the University of Namibia (27 FTEs) and the Department of Agriculture at the Polytechnic of Namibia (3 FTEs). Research conducted by the nonprofit and private-for-profit sectors in Namibia is minimal.



 For a complete list of the agencies included in ASTI's dataset for Namibia, visit [www.asti.cgiar.org/namibia](http://www.asti.cgiar.org/namibia).

## ASTI DATA PROCEDURES AND METHODOLOGIES

- ▶ The **data underlying this factsheet** were predominantly derived through primary surveys, although some data were drawn from secondary sources or were estimated.
- ▶ **Public agricultural research** includes research conducted by government agencies, higher education agencies, and nonprofit institutions.
- ▶ ASTI bases its calculations of human resource and financial data on **full-time equivalent (FTE) researchers**, which take into account the proportion of time staff actually spend on research compared with other activities.
- ▶ ASTI presents its financial data in 2005 local currencies and **2005 purchasing power parity (PPP) dollars**. PPPs reflect the relative purchasing power of currencies more effectively than do standard exchange rates because they compare prices of a broader range of local—as opposed to internationally traded—goods and services.
- ▶ ASTI estimates the **higher education sector's research expenditures** because it is not possible to isolate them from the sector's other expenditures.
- ▶ Note that, due to **decimal rounding**, the percentages presented can sum to more than 100.

 For more information on ASTI's data procedures and methodology, visit [www.asti.cgiar.org/methodology](http://www.asti.cgiar.org/methodology); for more information on agricultural R&D in Namibia, visit [www.asti.cgiar.org/namibia](http://www.asti.cgiar.org/namibia).

## ACRONYMS USED IN THIS FACTSHEET

<b>AgGDP</b>	Agricultural gross domestic product
<b>DART</b>	Directorate of Agricultural Research and Training
<b>FTE(s)</b>	Full-time equivalent (researchers)
<b>MAWF</b>	Ministry of Agriculture, Water and Forestry
<b>NARI</b>	Namibian Agricultural Research Institute
<b>NCRST</b>	National Commission on Research, Science and Technology
<b>PPP(s)</b>	Purchasing power parity (exchange rates)
<b>R&amp;D</b>	Research and development

## ABOUT ASTI and IFPRI

Working through collaborative alliances with numerous national and regional R&D agencies and international institutions, **Agricultural Science and Technology Indicators (ASTI)** is a comprehensive and trusted source of information on agricultural R&D systems across the developing world. ASTI is led by the **International Food Policy Research Institute (IFPRI)**, which—as a CGIAR member—provides evidence-based policy solutions to sustainably end hunger and malnutrition and reduce poverty.

ASTI/IFPRI gratefully acknowledge participating agricultural R&D agencies for their contributions to the data collection and preparation of this country factsheet. ASTI also thanks the Bill and Melinda Gates Foundation for its generous support of ASTI's work in Africa south of the Sahara. This factsheet has been prepared as an ASTI output and has not been peer reviewed; any opinions are those of the authors and do not necessarily reflect the policies or opinions of IFPRI.

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