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.
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

<table>
<thead>
<tr>
<th>Country</th>
<th>Total number of researchers, 2011 (FTEs)</th>
<th>Growth in number of researchers, 2008–2011</th>
<th>Share of PhD researchers, 2011 (FTEs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Namibia</td>
<td>89.4</td>
<td>10%</td>
<td>13%</td>
</tr>
<tr>
<td>Botswana</td>
<td>123.8</td>
<td>26%</td>
<td>20%</td>
</tr>
<tr>
<td>Malawi</td>
<td>162.3</td>
<td>41%</td>
<td>20%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>313.6</td>
<td>22%</td>
<td>8%</td>
</tr>
</tbody>
</table>
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.

- 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.

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.

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

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Namibia</td>
<td>43.1</td>
<td>69%</td>
<td>4.27</td>
</tr>
<tr>
<td>Botswana</td>
<td>17.5</td>
<td>–27%</td>
<td>2.44</td>
</tr>
<tr>
<td>Malawi</td>
<td>34.3</td>
<td>110%</td>
<td>1.03</td>
</tr>
<tr>
<td>Mozambique</td>
<td>20.7</td>
<td>14%</td>
<td>0.36</td>
</tr>
</tbody>
</table>
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.

ACRONYMS USED IN THIS FACTSHEET

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

ABOUT ASTM 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.