



A Decade of Advancing Inclusive Agricultural Research: The AWARD Story

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### Abbreviations and Acronyms

AAIN	African Agribusiness Incubation Network
ACIAR	Australian Centre for International Agricultural Research
AfDB	African Development Bank
AgTech	Agricultural technology
APTECA	Aflatoxin Proficiency Testing and Control in Africa, Asia, Americas and Europe
ASERECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
AST	Advanced Science Training
A-TEAM	African Trainers Embracing the AWARD Mission
AU	African Union
AWARD	African Women in Agricultural Research and Development
AWSEM	African Women in Science Empowerment Model
BMGF	Bill & Melinda Gates Foundation
CAADP	Comprehensive Africa Agriculture Development Programme
CIMMYT	International Maize and Wheat Improvement Centre
CORAF/WECARD	West and Central African Council for Agricultural Research and Development
CSIR	Council for Scientific and Industrial Research
CSO	Civil society organization
СТА	Technical Centre for Agricultural and Rural Cooperation
EIAR	Ethiopian Institute of Agricultural Research
FAO	Food and Agriculture Organization of the United Nations
FARA	Forum for Agricultural Research in Africa
FTE	Full-time equivalents
FUNABB	Federal University of Agriculture, Abeokuta
GAIA	Gender in Agribusiness Investments for Africa
GCARD	Global Conference on Agricultural Research and Development
GDP	Gross domestic product
GFAR	Global Forum on Agricultural Research and Innovation
GRARD	Gender-Responsive Agricultural Research and Development
GREAT	Gender-Responsive Researchers Equipped for Agricultural Transformation
HLPE	High Level Panel of Experts (FAO)
JIC	John Innes Centre
IARC	International agricultural research centers
ICBA	International Center for Biosaline Agriculture
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics

IFC	International Finance Corporation
IFPRI	International Food Policy Research Institute
ILRI	International Livestock Research Institute
LEPARD	Leadership Program for Agricultural Research and Development
LUANAR	Lilongwe University of Agriculture and Natural Resources
M&E	Monitoring and evaluation
MEL	Monitoring, evaluation and learning
MIS	Management information system
MOW	Mentoring orientation workshop
NARO	National Agricultural Research Organization
NARS	National agricultural research system
NGO	Non-governmental organization
NM-AIST	Nelson Mandela African Institution of Science and Technology
PRM	Purpose road map
R&D	Research and development
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
SDG	Sustainable development goal
SRO	Sub-regional organization
SSA	Sub-Saharan Africa
SUA	Sokoine University of Agriculture
TARI	Tanzania Agricultural Research Institute
ТоС	Theory of change
ТоТ	Training of trainers
TWAS	The World Academy of Sciences
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
WIPO	World Intellectual Property Organization
ZaSCI	Zanzibar Seaweed Cluster Initiative

## Foreword



Vicki Wilde, Founder, AWARD

The story of African Women in Research and Development's beginnings is as humble as its impact is deep. Born out of ideas initially scribbled on a paper napkin, then refined and iterated with partners from across Africa and beyond, the AWARD story is the story of passion and purpose brought to life.

As I look back over the past 10 years of tremendous success, I marvel at the achievements that—while having surpassed our original plans—are entirely in keeping with what we always envisioned.

In a continent heavily reliant on agriculture as the primary livelihood source for a majority of its people and that contributes more than a third of its GDP, there is no room for missed opportunities in the sector. The underrepresentation of women in agricultural research and development leadership represents a missed opportunity for Africa to maximize on all of its available resources, including the scientific talents of its women. Watching AWARD grow from a simple idea to an unprecedented reality has truly been exciting and gratifying.

Ten years ago, we set out on a journey to fix the leaky pipeline of African women's leadership in agricultural research. Looking beyond the individuals to a holistic approach, including institutions and other actors in agricultural value chains, is critical to sustaining the gains made. I am exceedingly proud that AWARD has continued to realize the importance of inclusive transformation and grown its mandate to ensure sustainable agricultural research and development in Africa.

I am often overwhelmed by listening to the inspiring stories of the AWARD Fellows, their achievements and how they are impacting their communities. I am proud to see that these inspiring stories are now spread across Africa, with the pan-African reach of the AWARD Fellowship.

I am hopeful that as AWARD marks 10 years of immense success and splendid partnerships established along the way, this milestone will provide impetus to AWARD and its partners as they continue to influence the agricultural landscape in Africa.

My congratulations and thanks to the staff, steering committee, donor partners, and all those who have kept the vision alive.

# from the Directo Vessage



Dr. Wanjiru Kamau-Rutenberg, Director, AWARD

t is a special moment for us and our partners as we mark 10 years of steady growth in many ways.

Since 2008 we have been working to plug the leaky pipeline of women's leadership in agricultural science through the AWARD Fellowship. Africa is doing little to leverage the full potential of women scientists to solve most of its food security needs, yet scientific research is done by both men and women. We are investing in women scientists to ensure that our top scientists are at the table setting the agenda and leading research that is going to help us feed ourselves in the face of the constraints that we face as a continent.

The success of the AWARD Fellowship unveiled a tremendous appetite from African institutions for the work we do. This called us to step beyond our initial focus on women agricultural scientists to respond to a complexity of gender challenges along the agricultural value chains. We have taken time to reflect and consult on how best to consolidate our efforts. We have interrogated data for gaps and opportunities and looked at trends emerging from our collaborative work. This process delivered the AWARD Strategy

2017-2022. In our strategy, we appreciate the significance of partnering with African research institutions committed to building a more gender-responsive agricultural research system. AWARD works with these institutions to identify and nurture emerging talents among their scientists and to create policies that support inclusive transformation. We also recognize that it is not enough to support research institutions and emerging scientists, but we also need to pay attention to how to get research out of the labs and into the hands of value chain actors. We support agribusinesses to assimilate a gender lens into their growth plans.

Despite the 10 years of effort we have put in as AWARD, the African continent still has a long way to go. We have seen that the women scientists who have come through AWARD have advanced in their careers faster than their counterparts who did not have access to the AWARD Fellowship. Therefore, it is worth celebrating that we have developed a model that indeed accelerates the careers of African women scientists. Our challenge, then, is how do we ensure that more African women scientists have access to the AWARD Fellowship?

We have learned the value of coalescing our alumni into country chapters so that women scientists can come together and work toward bridging gaps and bringing transformative change at the national level. We have also learned the critical role that research institutions play in shaping Africa's agriculture. If we can encourage African research institutions to adopt the AWARD model, we will see research institutions appointing their brightest minds to positions of leadership. Moving forward, we are excited about our commitment to a pan-African vision, which led to the expansion of our fellowship initiative to francophone Africa. We are proud to see how the AWARD Fellows are stepping out into leadership by heading institutions and national research centers, and setting the agenda for Africa's agricultural research. These women scientists lead differently. They bear testimony to leading differently because of their experience with the AWARD Fellowship. These milestones in our journey in tracing gender-responsive agricultural research from the lab to farm to market show that we are all in this together.

I am proud of the strides we have taken thus far and even more excited about what we are yet to achieve. We are cognizant of the enormous effects of climate change, especially on African farming systems, and appreciate that African scientists need to start paying close attention to devise appropriate technologies to support climate change adaptation. Our newest initiative, the One Planet Fellowship, is a result of a successful partnership that has facilitated the scaling up of the AWARD Fellowship. The One Planet Fellowship will support emerging African scientists to understand the nexus between gender and agriculture in the context of climate change and the opportunities available to help farmers cope.

We celebrate the commitment of our partners, the guidance of the members of our steering committee over the years, and the commitment of the team at AWARD that supports the delivery of our objectives. There can be no success without a good strong team to keep the vision and mission alive and on course.

### Preface

The critical contribution of agriculture to Africa's development is well known, yet the significance of gender gaps in agriculture cannot be over-emphasized. From the lower productivity of women farmers compared to male farmers (gender gap in agricultural productivity) to fewer women researchers than men and even fewer women research leaders compared to men (the leaky pipeline), the inadequacies have been well articulated. At the same time, various actors have acknowledged the need to close observed gender gaps, highlighting different action plans and frameworks to facilitate this process. Universal, regional and national calls for action continue to underline the need for gender equality to facilitate inclusive agriculture-driven prosperity. Since 2008, African Women in Agricultural Research and Development (AWARD) has invested in closing the leaky pipeline and facilitating gender-responsive agricultural research and development.

This report illustrates how investment in widening the pipeline of women agricultural researchers in leadership is contributing to gender-responsive agricultural research and development. It reflects selected results achieved over the last 10 years thanks to the collaboration and commitment of our partners.

### Structure of the report

**Section 1** provides an overview of AWARD, including how it evolved from focusing solely on accelerating the careers of African women agricultural researchers to widening its scope to the agricultural research and development ecosystem.

**Section 2** presents the facts, figures and trends that highlight the achievements of AWARD's interventions, including selected success stories. The facts reveal that investing in individuals contributes not only to individual transformation, but also has an impact on institutions and nations.

**Section 3** describes AWARD's crosscutting initiatives that have been instrumental in delivering its interventions. We present how these initiatives have catapulted our growth and our plans to strengthen these initiatives.

**Section 4** highlights the significance of our partnerships and their immense contribution to our achievements.



### **Overview of AWARD**



Women scientists in sub-Saharan Africa are less represented in high-level research and management positions in research organizations compared to their male colleagues.

### About AWARD

MARD Tolini

African Women in Agricultural Research and Development (AWARD) works toward inclusive, agriculture-driven prosperity for the African continent by strengthening the production and dissemination of more gender-responsive agricultural research and innovation. We aim to catalyze transformative changes in scientists and agricultural research and development institutions by enabling these different level actors to conduct and promote agricultural research and innovation that better respond to the needs and priorities of a diversity of women and men across Africa's agricultural value chains.

Gender Responsive Research and Development Opment utrut

### Individual

Capable, confident, and influential African women scientists lead critical advances **Vision** 

### Institutional Engagement

African

agricultural innovation system working towards agriculture-driven prosperity for Africa

and development.

A gender responsive

### **Mission** Investing in African women scientists,

Enabling environment environment agricultural research institutions, and agribusinesses to deliver genderresponsive agricultural research

and innovations

in ARD.

Gender

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responsiveness is a norm embedded

in the culture and practice of the Africa ARD sector. agricultural R&D institutions prioritize and embrace gender responsiveness in both policy and

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practice.

### AWARD 2017–2022 - Our Strategy

### **Our vision**

AWARD envisions a robust, resilient, and gender-responsive agricultural innovation system working to drive prosperity and food and nutrition security for Africa.

### Our mission

Contributing toward this vision, AWARD is investing in African scientists, research institutions, and agribusinesses to deliver innovative, sustainable, gender-responsive agricultural research and innovation

Guiding the execution of our mission are three pillars:

### Pillar 1:

We seek to have capable, confident, and influential women scientists lead critical advances and innovations in the African agricultural research and development sector.

We will continue investing in high-achieving women scientists and building the continent's pool of talented innovators.

### Pillar 2:

We will support African agricultural research and development institutions to prioritize and embrace gender responsiveness in both policy and practice. We will work with selected partner institutions to grow their capacity for gender-responsive agricultural research by leveraging the talents of genderdiverse research teams, and by strengthening gender prioritization in research, design, implementation, and dissemination.

### Pillar 3:

We will work to ensure that gender responsiveness becomes an embedded cultural norm and practice in the African agricultural research and development sector and beyond; by strengthening the ability of research institutions and individual scientists to conduct more inclusive, better targeted, and better designed agricultural research in Africa. We focus on increasing the visibility of individual scientists and leaders, generating and curating compelling evidence on the value of gender responsiveness in agricultural research and development institutions. We will also work to transform the growing awareness of gender and related issues into policies, programs, and accountability mechanisms.

### **Context of our work**

Food security is one of the most pressing issues of our time as the world faces the challenge of increasing the amount of food<sup>1</sup> it produces by more than 70 percent and to do so before the crunch point when population growth outstrips the ability to produce food. It is further recorded that production in developing countries would need to almost double to sustain the increasing rate of population growth.<sup>2</sup> These challenges, while global, affect men and women (young and old) differently at different times in different contexts due to gendered needs, roles and responsibilities underpinned by societal norms. With well-documented evidence of climate change—as seen in rainfall variability, severe drought, catastrophic flooding, and sea level changes-it is clear that more pragmatic approaches are required.

Yet Africa in particular remains plagued by gender gaps that cripple its ability to make the best use of the talent of its people, resulting in non-inclusive research systems, agricultural innovations, agricultural productivity and thus, stifled progress toward food and nutrition security.

Although it is widely recognized that to increase Africa's agricultural output, women—who provide up to 70 percent of agricultural labor—must be on an equal footing with men, significantly fewer women than men are employed in agricultural research and development, critically undermining the role of women in research, policy and decision-making processes. Just 24 percent of agricultural researchers in sub-Saharan Africa (SSA) are women, and the number declines to 7 percent within leadership of African agricultural research institutions.<sup>3</sup>

While these challenges are enormous, they certainly are not insurmountable with the right strategy well executed. The United Nations sustainable development goals (SDGs) highlight gender equality as a global development priority.<sup>4</sup> The African Union's AGENDA 2063 – The Africa We Want singles out increased investment in science, technology, research and innovation as key access to a better quality of life, noting that this must be premised on inclusion. Further, the 2014 Malabo Declaration reaffirms that it will intentionally support all segments of society, particularly women, youth and other disadvantaged sectors, to participate in and directly benefit from growth and transformation opportunities to improve their lives and livelihoods. The urgency of finding lasting solutions to improved productivity and accelerated innovation in agricultural research and development has never been greater.

With eyes turned toward science and innovation for answers, an opportunity exists for AWARD to highlight the transformative value of inclusive agricultural research.

<sup>1.</sup> AGRA. Africa's growth lies with smallholder farmers. https://agra.org/africas-growth-lies-with-smallholder-farmers/ Accessed online 26/10/2018.

<sup>2.</sup> FAO, How to Feed The World in 2050. http://www.fao.org/fileadmin/templates/wsfs/docs/expert\_paper/How\_to\_Feed\_the\_World\_in\_2050.pdf

<sup>3.</sup> Beintema, N. 2017. An assessment of the gender gap in African agricultural research capacities Journal of Gender, Agriculture and Food Security.

<sup>4.</sup> SDG 5 - Achieve gender equality and empower all women and girls.



Dr. Mary Oyunga, AWARD Fellow 2009, discusses the cassava crop with farmers in Kisumu, Kenya.

AWARD appreciates how critical it is that the diversity of women and men are involved at all stages of the agricultural value chain. The premise of diversity is that it spurs innovation and encourages the competition of ideas benefiting institutions and processes that encourage diverse teams.<sup>5</sup> Other players in Africa's agricultural research and development landscape equally recognize the importance of closing gender gaps in agricultural research. In 2014, the Forum for Agricultural Research in Africa (FARA) launched the Science Agenda for African Agriculture, emphasizing the need to mainstream gender in African research and advance women's leadership in science and technology.6

### Establishing the AWARD Fellowship

The Agricultural Science and Technology Indicators (ASTI) initiative of the International Food Policy Research Institute (IFPRI) began collecting gender-disaggregated data on professional agricultural scientists by highest degree and institute type for about 60 countries in the early 1990s. In 2005, CGIAR GenderandDiversityProgram(G&D)andASTI partnered to conduct a major benchmarking survey involving 125 institutions in 15 key SSA countries. This was the first study to provide detailed data on African women agricultural scientists.<sup>7</sup> It found that women scientists in SSA are less represented in highlevel research and management positions in research organizations compared to their male colleagues. As a result, women are not represented or involved in decisions to influence agricultural policy, research and innovation.

The process identified a deeply felt need for soft skills and leadership training. Importantly, it also stressed the need to strengthen and support women's scientific research skills so that they are better able to deliver gender-responsive, pro-poor research and development and occupy leadership positions as competent scientists and not as token appointees.

To plug the gaps identified, a two-year nonresidential career-development fellowship program was created. From 2005 to 2007 G&D ran a pilot fellowship program for crop scientists from three East African countries, funded by the Rockefeller Foundation. With impressive outcomes from the pilot, the AWARD Fellowship launched in 2007 with seed funding from the Bill & Melinda Gates Foundation (BMGF) and the United States Agency for International Development (USAID).<sup>8</sup>

<sup>5.</sup> D. Mukhebi, S. de Villiers, S. Okoth, V. Wilde (2) and A. Nkwake (1) Building science skills to improve the contributions of women to agricultural research and development in Sub-Saharan Africa, Journal of Gender, Agriculture and Food Security, ((1)African Women in Agriculture Research and Development (AWARD), Nairobi Kenya; (2) Bill and Melinda Gates Foundation, Seattle, Washington).

<sup>6.</sup> Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods, adopted during the 23rd Assembly of the African Union, 26-27 June 2014 Venue: Malabo, Equatorial Guinea.

<sup>7.</sup> This study was used to benchmark the AWARD Fellowship.

<sup>8.</sup> The cohort of fellows for the pilot was drawn from Kenya, Tanzania and Uganda.

### Growing up and out

The AWARD Fellowship has evolved to be a prestigious and sought-after accolade among women scientists with a steady increase in global demand. As shown in the figure over leaf, AWARD has continued to receive an overwhelming number of applications for the 493 slots over the past decade. The outstanding gains made by AWARD Fellows, some of which are captured throughout this report, fuels interest in our work.

The Africa Agriculture Status Report 2017 highlights the need for a more holistic and multisectoral approach in tackling the challenges faced in agriculture, for inclusive agricultural transformation.<sup>9</sup> In the report, Dr. Kanayo Nwanze, 2016 Africa Food Prize Laureate and former President of the International Fund for Agricultural Development (IFAD), noted that inclusiveness is a choice that countries need to make:

Economic transformation may be inevitable as the world changes, but inclusiveness is a choice and countries need to take specific actions and make specific policy choices and investments—to enable rural people to seize the opportunities and deal with the threats.<sup>10</sup>



Appreciating the need for inclusive agricultural transformation, AWARD made that conscious choice and in its strategy 2017-2022, AWARD is extending its operations beyond the individuals to the institutions and to the agricultural research environment.

The strategy was developed to help AWARD better align itself with the current needs of the African agricultural research sector. In 10 years of implementing the fellowship, we have learned valuable lessons. AWARD data and ASTI studies indicate the need for continued development of leadership capacities of women scientists in agricultural research and development. Further, the imperative to address gender responsiveness in research institutions in which fellows work has been highlighted as a contributor to achieving self-driven, inclusive growth in support of gender-responsive agricultural research and development. This informed the development of additional programmatic initiatives to execute our mission. Four initiatives now form the core of AWARD's programmatic activities:

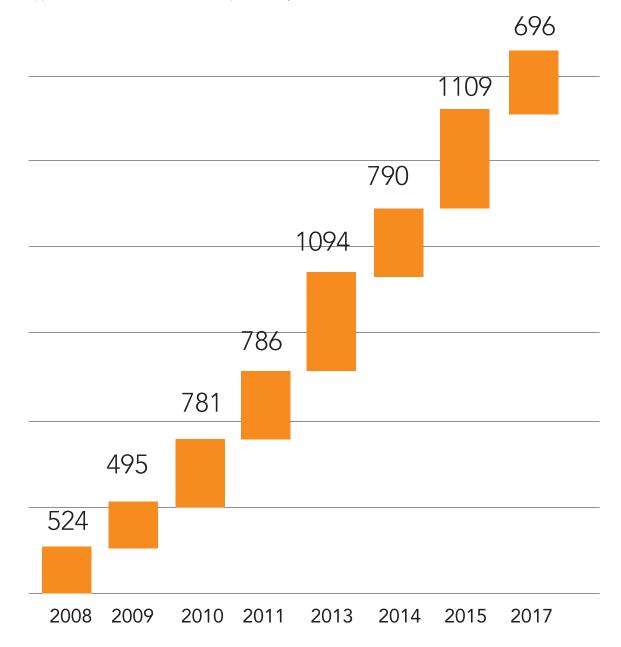
 AWARD Fellowship is a careerdevelopment program investing in the continent's leading women agricultural scientists to ensure a growing cohort of capable, confident and influential African women scientists is available to lead critical advances and innovations for the agricultural sector.

<sup>9</sup> AGRA, 2017. Africa Agriculture Status Report: The Business of Smallholder Agriculture in Sub-Saharan Africa (Issue 5). Nairobi, Kenya: Alliance for a Green Revolution in Africa (AGRA). Issue No. 5 – Foreword by Dr. Kanayo Nwanze.

<sup>10</sup> Report places rural transformation at the heart of economic development, 15 September 2016 https://www.downtoearth.org.in/news/economy/ reports-places-rural-transformation-at-the-heart-of-economic-development-55687 Accessed 14/11/2018

### **AWARD Fellowship Applications**

Number of applications for the AWARD Fellowship over the years (Source: AWARD Data)

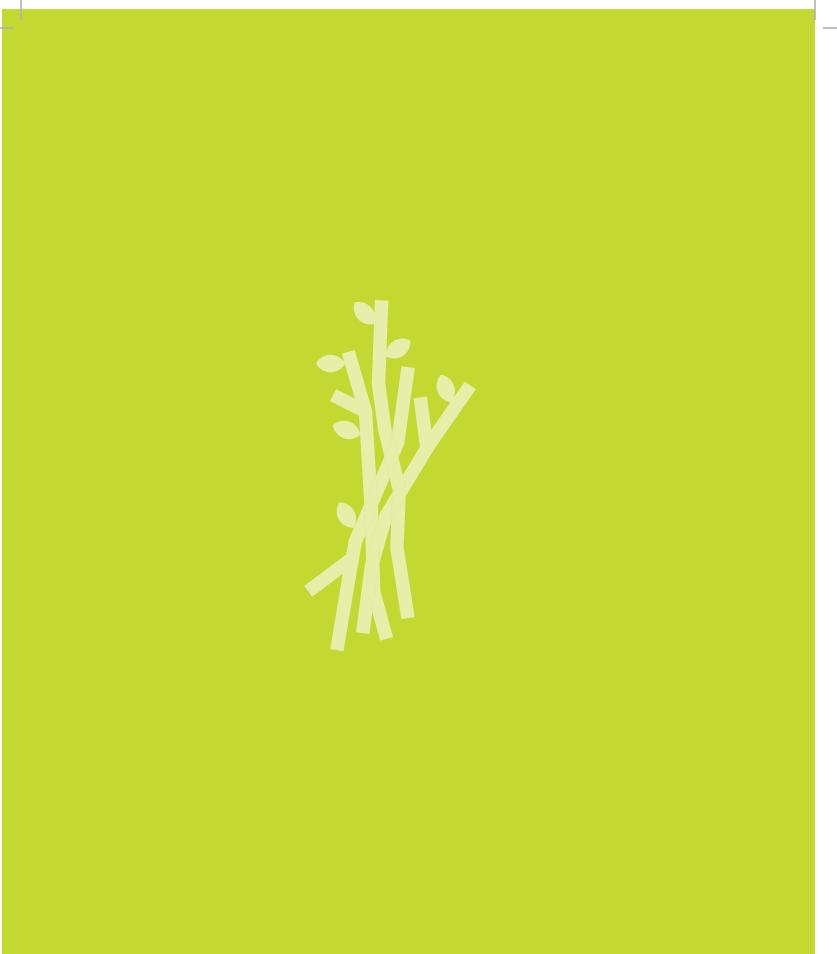


- Gender-Responsive Agricultural Research and Development (GRARD) supports African research institutions as they seek to produce research that responds to the needs and priorities of a diversity of men and women across the agricultural value chain. GRARD also supports African research institutions to build and effectively leverage the talents of more diverse and inclusive teams.
- Gender in Agribusiness Investments for Africa (GAIA) identifies, spotlights and supports the growth of agribusinesses

with the potential and commitment to bridge the gender gap in African agriculture.

 AWARD Training designs customized learning experiences focused on building the leadership, mentoring, scientific research and technical gender skills of Africa's agricultural research workforce and decision makers.







### AWARD's Ten-year Results and Selected Success Stories



Dr. Binta Iliyasu, AWARD Fellow 2014, works in northern areas of Nigeria where the disease Trypanasomiasis is a big challenge to livestock-keeping communities.

### Accelerating the Careers of African Women Scientists

Through the AWARD Fellowship, AWARD is investing in accelerating the careers of the continent's leading women agricultural scientists.

The AWARD Fellowship cultivates a growing pool of women to be:

- effective within agricultural research and development institutions supporting the agricultural value chain;
- effective across a range of research disciplines serving the sector;
- responsive to gender issues in the service of women without excluding men; and
- technically competent to generate innovations needed by rural smallholders.

The core intent is to empower women scientists and propel them to leadership across agricultural research and development.<sup>11</sup>

Having started with 10 anglophone African countries and lusophone Mozambique, the AWARD Fellowship has since expanded to attain a pan-African outlook, reaching an additional nine francophone African countries. In 2017, three international agricultural research institutes partnered with AWARD to offer the fellowship experience to their scientists, extending our reach beyond Africa for the first time to include fellows from Spain, Bangladesh and Fiji.

The AWARD Fellowship has equipped 493 leading women agricultural researchers from 23 countries (20 sub-Saharan and three non-African) with leadership skills and exceptional scientific skills, and has fostered mentoring partnerships among them. In addition, the fellowship has directly benefited 785 individuals who have served as AWARD mentors and fellows' mentees.

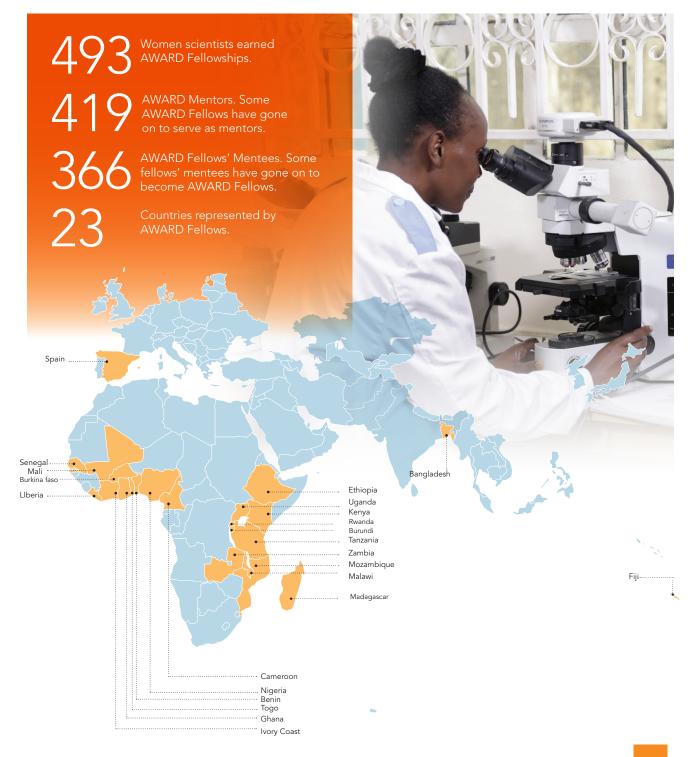
The AWARD Fellows are outstanding, highpotential women agricultural researchers with demonstrated focus on implementing research-based solutions to improve the livelihoods of smallholders. Recent data<sup>12</sup> indicates that AWARD Fellows comprise up to 23 percent of female agricultural researchers in the 20 SSA countries covered by the AWARD Fellowship.

The AWARD Fellowship delivers multiplewin benefits by simultaneously fostering mentoring partnerships, building science skills and developing leadership skills. Fellows have told us that they have acquired the following benefits from the fellowship:

<sup>11.</sup> AWARD, 2012. Effective Solutions for Agricultural Development through Empowered African Women Scientists, (AWARD).

<sup>12.</sup> https://www.asti.cgiar.org/gender.

### AWARD Fellowship Footprint



### **Fostering mentoring partnerships**

Mentoring, whether formal or informal, provides access to information, networks and resources and is identified as a proven and powerful tool for career development, and particularly for retaining women in science. Evidence has established that "mentoring remains an essential component of effective knowledge transfer, well-planned career development and professional networking."<sup>13</sup> Science, Technology and Innovation Strategy for Africa 2024 (STISA 2024), part of the long-term people-centered AU Agenda 2063, singles out mentoring as a key avenue that will be leveraged for successful implementation of the Agenda. A Rockefeller Foundation Study in the United States established that mentoring has a crucial role to play in increasing the number of women in leadership.<sup>14</sup>

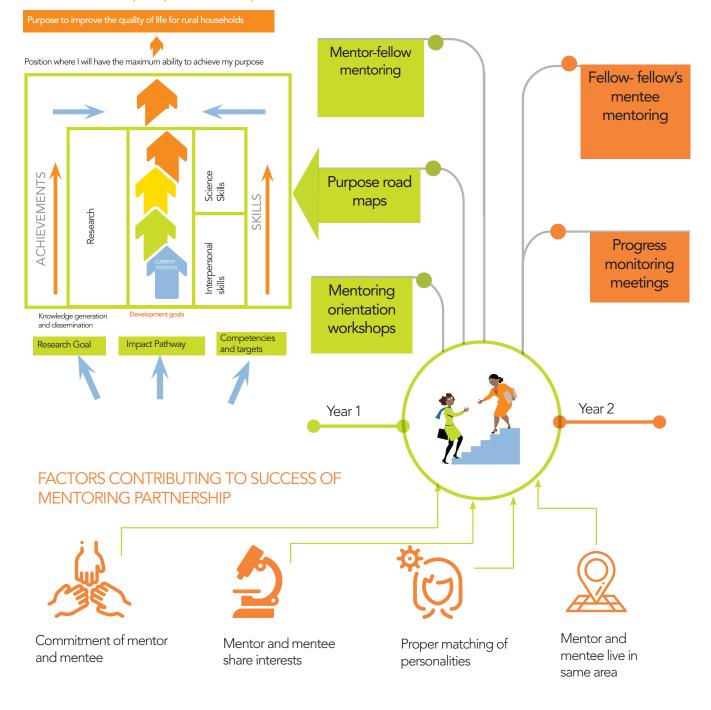
Within the AWARD Fellowship, mentoring is an essential component specifically designed to help AWARD Fellows achieve their set goals. AWARD pairs each fellow with a senior respected professional, carefully chosen to match the research interests and career goals of the AWARD Fellow. Mentors may be women or men, and data shows the gender breakdown almost evenly split between the 397 scientists who have benefited as mentors to AWARD Fellows.

Fellows and their mentors attend a five-day facilitated Mentoring Orientation Workshop (MOW) during which they are introduced to planning tools specifically designed to facilitate a successful working relationship and to initiate a supportive and collaborative network among fellows, mentors and the AWARD team. The first of the tools is the mentoring contract-written goals that the mentor and fellow want to achieve in working together and stipulating how they will achieve them. Fellows also develop a career timeline to actively plan their future, a purpose road map (PRM) to guide their progress, and a Development Journal in which they turn their PRM into achievable, clearly defined actions and milestones. These tools support the two-year journey of each AWARD Fellow during the fellowship and beyond.

Other key beneficiaries of the mentoring partnerships are the AWARD Mentors who derive significant benefits by widening their network and are exposed to new ideas and methods from working with fellows and from participating in AWARD training courses designed for them. They get to deepen their understanding of gender issues in agricultural research and development and to enhance their skills in mentoring, listening, and role modeling.

### AWARD Mentoring Model

AWARD Fellowship Purpose Road Map



### **ASTI Data - Female Researchers**

1

Total number of female researchers in the African countries covered by the AWARD Fellowship in full-time equivalents (FTEs)

	AWARD Fellows in the 20 African countries comprise 23 percent of total women agricultural researchers
Nigeria	441.0
Kenya	344.9
Ethiopia	
Tanzania	231.2
Ghana	125.9
Uganda	123.5
Mozambique	108.3
Madagascar	68.9
Zambia	68.1
Burkina Faso	59.7
Cameroon	50.1
Côte d'Ivoire	42.7
Rwanda	35.3
Malawi	32.4
Mali	27.8
Burundi	23.7
Benin	22.7
Senegal	20.0
Source: 2018. ASTI (Agricultural Science Liberia	9.2
and Technology Indicators). ASTI database. International Food Policy Research Institute (IFPRI).	8.0

### Success Story



Professor Kamau Ngamau acknowledges that he learned a lot from participating as an AWARD Mentor; in between mentoring sessions he monitored the career progress of his protégé, AWARD Fellow, Naomi Chelimo. The transformation in Chelimo was phenomenal, notes Ngamau. At the beginning of the mentoring process, Professor Ngamau helped Chelimo develop her PRM during the MOW and describes the process of watching Chelimo fulfill it as enriching and exciting. Ngamau, who is a Professor of Horticulture at the Jomo Kenyatta University of Agriculture and Technology (JKUAT), calls mentoring an eye-opener.

"I stumbled through my career without much guidance, without having a mentor or a role model

to guide me." He says the tools used in the AWARD mentoring model allow fellows to bring sharp focus to their career and grow in their area, noting that the AWARD Fellowship has great potential in shaping the careers of young scientists beyond the fellowship. He confirms that he has implemented some of the lessons he learned in the process of mentoring.<sup>15</sup>

The AWARD mentoring model is uniquely designed to ensure that the learning and experiences are cascaded to various levels. Not only is the AWARD Fellow paired with a mentor, but she also gets to select a junior scientist as an AWARD Fellow's Mentee.

15. A Mentor's Journey (with French subtitles) - Kamau Ngamau

### Success Story



When AWARD Fellow Catherine Mloza Banda told Pilirani Khoza that she wanted to mentor her, Khoza was skeptical. She went along because she could see that Banda had accomplished a lot as an AWARD Fellow, including being invited to speak at high-level meetings at home and abroad. Banda said she could help Khoza achieve the same. Working together with her mentor, Khoza, a forestry researcher at Lilongwe University of Agriculture and Natural Resources (LUANAR) in Malawi, submitted her first successful application and was invited to speak at an international meeting. Then Banda helped her prepare her presentation for the conference with such success that fresh

invitations to speak at various conferences in different countries followed. Khoza credits the mentorship of Banda with giving her confidence as a speaker and understanding that she can achieve her dreams.

"I consider my experience as an AWARD Fellow's Mentee to be the launch of my success," says Khoza, describing the year of mentorship as "transformative". In 2017, she participated in AWARD's inaugural GAIA AgTech Innovation Challenge for Southern and Central Africa. At the GAIA Challenge, Khoza introduced the organization she founded at LUANAR, Bunda Female Students Organisation (BUFESO), which empowers women and girls to choose agriculture as a profession supporting them with funding and mentoring. Separately, with funding from Young Professionals for Agricultural Development (YPARD), she is also implementing career-building and role-modeling programs in rural secondary schools in Malawi, and received the 2018 Queen's Young Leader's Award for her work in the community.

### The AWARD mentoring model creating ripples

The success of the AWARD mentoring model has inspired various other organizations to adopt mentoring as a key component of career development for their target groups and to embed mentoring based on the AWARD model into their activities. This has an important multiplier effect in advancing the AWARD agenda and promoting linkages and partnerships as we share our knowledge and experience.

Examples of some institutions that have adopted the AWARD model include:

 The Young Professionals for Agricultural Development (YPARD) uses mentoring as a key activity to deliver its objectives. They partnered with AWARD to develop a toolkit based on the AWARD Fellowship mentoring and lessons learned from a yearlong pilot of YPARD Mentoring Program initiated in Kenya in June 2015. The pilot included 15 YPARD members comprising farmers, students, entrepreneurs, young scientists and extension workers from across the country. Mentors and mentees met during a three-day orientation workshop facilitated by an AWARD trainer.

The newly released toolkit – Coordinating a Mentoring Program: A Toolkit for Agriculture, Forestry, Landscapes and Other Sectors - is a synthesis of learnings and resources from mentoring programs implemented by AWARD and other partners. It is designed to have an international outlook and reach, developed as an online tool integrating virtual technologies to mediate the mentoring process. All coordination takes place through this online platform, reducing the need for physical meetings. The tool allows mentor and mentee pairs to connect regardless of their geographical location.

This intergenerational support ensures that young men and women's voices are heard when shaping the future of sustainable food systems, and that the need for successive generations of agricultural scientists, leaders and agribusiness champions will be met. The growing number of institutions that have embedded mentoring into their activities based on the AWARD model greatly extends the impact of AWARD in agricultural R&D and further validates the powerful role of our mentoring model.

 Ghana's Council for Scientific and Industrial Research (CSIR) nominated 46 scientists, evenly representing men and women and almost equally split between junior and senior scientists to be part of a yearlong mentoring process. At a training session held in June 2015 led by AWARD trainers, participants were introduced to the AWARD mentoring model and equipped with tools and skills to execute the mentoring process. Prior to the training, AWARD trainers worked with three CSIR staff for two days introducing them to mentoring and tailoring the course to the Ghanaian context, the CSIR organizational culture and institutional needs.  Sokoine University of Agriculture (SUA) Tanzania partnered with AWARD to embed an MOW for junior and newly appointed staff into its system. The model used was based on AWARD's mentoring initiative. The first round of mentoring was conducted in September 2013 with 23 mentoring pairs participating. A second round of mentoring was implemented in July 2016 with support from AWARD.<sup>16</sup>



Professor Sheila Okoth, center, is recognized as an authority on aflatoxin in East Africa and the laboratory she established after her AWARD Fellowship experience is now a national referral laboratory

<sup>16.</sup> AWARD partnered with the Gender Policy Implementation Committee (GPIC) of Sokoine University of Agriculture (SUA), Tanzania and the Innovative Agricultural Research Initiative managed by Ohio State University. http://iagri.org/core-activities/organizational-transformation/ongoing-experiments/mentoring-program/.

### AWARD Builds Science Writing Skills



AWARD Mentor, Dr. Wilkister Moturi consults Dr. Pamela Marinda, AWARD Trainer during the Science and Research Proposal Writing Course, 2018 while AWARD Fellow (2018) Harriet Achiaa Dwamena from Ghana listens in.

Successful funding proposals developed by AWARD Fellows (Source: Integrated Final Evaluation Report, AWARD Phase II, Round 5-7) 960

Total number of publications fellows contributed to during their fellowship period (Source: Synthesized from AWARD data). 7/10 Fellows contributed to at least 1

publication

(Source: Integrated Final Evaluation Report, AWARD Phase II, Round 5-7)

### **Building science skills**

Before they can be effective agricultural research leaders, AWARD Fellows must first be scientists of uncompromising quality. As such, strengthening the scientific research skills of the fellows is the second significant unit of the AWARD Fellowship. Building and sustaining a strong, effective talent pool of agricultural scientists is key to improving the livelihoods of those dependent on agriculture. By building the fellows' science skills, AWARD expands their world of science, facilitates their access to the latest methodologies and technologies and builds their professional networks. AWARD trains fellows in science writing and supports them in advancing their scientific skills.

### Plugging the scientific publishing gender gap

Studies<sup>17</sup><sup>18</sup>, have shown that women are less likely than men to publish in scientific journals and when they do publish they are less likely to be the lead investigator. The underrepresentation of women in scientific research is not unique to Africa. It is a global phenomenon that women publish fewer research articles than men and are less likely to collaborate internationally on research papers due to lower levels of mobility.<sup>19</sup> A recent study concluded that the gender gap in science publishing "will not close without further reforms in education, mentoring and academic publishing."<sup>20</sup>

While huge gender gaps are recorded in science publishing, the career progression of researchers depends largely not only on how many publications they produce, but also on the quality of the publications. The well-worn phrase "publish or perish" is a blatant reality.<sup>21</sup> The lower numbers of women-authored publications therefore have far-reaching consequences.

Besides the increased emphasis for researchers to increase their communication and engagement with non-technical audiences, it is still paramount that they produce high-quality publications.

AWARD builds the science writing skills of its fellows by providing them with intensive training courses in scientific writing and publishing. AWARD Fellows produced 960 journal articles during their fellowship period (Rounds 1 to 7 of the AWARD Fellowship).<sup>22</sup> While this is impressive, it certainly is not sufficient, with data continuing to indicate that women contribute to less than 30 percent of scientific publications.<sup>23</sup> International collaborations among scientists have been identified as one way to close this gap.

<sup>17.</sup> Gender disparities in high-quality research revealed by Nature Index journals. PLoS One. 2018; 13(1): e0189136. Published online 2018 Jan 2. doi: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5749692/.

<sup>18.</sup> When Will the Gender Gap in Science Disappear? By Ed Yong. Published Apr 19, 2018 https://www.theatlantic.com/science/archive/2018/04/ when-will-the-gender-gap-in-science-disappear/558413/.

<sup>19.</sup> ELSEVIER, 2015, Gender in the Global Research Landscape: Analysis of research performance through a gender lens across 20 years, 12 geographies, and 27 subject areas https://www.elsevier.com/connect/gender-and-science-resource-center#benchmark-report.

<sup>20.</sup> The gender gap in science: How long until women are equally represented? by Luke Holman, Devi Stuart-Fox and Cindy E. Hauser. PLOS Published: April 19, 2018 https://doi.org/10.1371/journal.pbio.2004956.

### Success Story



Dr. Joy Odimegwu was a high school teacher in Lagos, Nigeria when she won an AWARD Fellowship 10 years ago. She was keen to build her science record and applied for advanced science training, a competitive component of the fellowship package. When her application was rejected she followed up with AWARD to understand the reasons for her unsuccessful application. On learning that her proposal had weaknesses, she purposed to focus on this draft during the Research Proposal Writing Skills training. The rewritten proposal was submitted and accepted by The Third World Organization for Women in Science, giving her a fully paid scholarship for a PhD.<sup>24</sup>

"That was the turning point for me in the fellowship and in my career," she notes. It taught her the strengthening role of feedback and discussion and disciplined her to pay attention to detail in presenting science proposals. She is now a lecturer at the University of Lagos and uses her science writing skills to raise funds for her research.

21. S. Rawat and S. Meena. Publish or perish: Where are we heading? J Res Med Sci. 2014 Feb; 19(2): 87–89. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3999612/.

22. The figure presented on page 35 is derived from AWARD's consolidated data on publications written by fellows during Rounds 1 to 7 of the AWARD Fellowship and includes peer-reviewed journals, conference proceedings, technical reports and books or book chapters.

- 23. https://www.nature.com/news/bibliometrics-global-gender-disparities-in-science-1.14321.
- 24. Third World Organization for Women in Science has been renamed the Organization for Women in Science for the Developing World (OWSD).

### Advanced Science Training

Advanced Science Training (AST) is part of the "building science skills" component of the AWARD Fellowship. Through AST, AWARD Fellows are selected to participate in research placements with partner institutions around the world. AST helps AWARD Fellows build and expand the solid scientific skills and knowledge in their areas of expertise, which are needed to produce the technological innovations and advances that contribute to positive sustainable impacts in agricultural research.

Successful applicants for AST are placed in the world's leading scientific research institutions. Over the last decade, 44 such institutions from 25 countries have partnered with AWARD to host research placements for fellows.

A recent study called Advanced Science Training: A decade of strengthening the research skills of African women through global partnerships, 2018—jointly conducted by AWARD and the U.K.-based John Innes Centre (https://www.jic.ac.uk/)—revealed that overall, a majority of the AWARD Fellows who participated in AST experienced significant improvements in their skills.<sup>25</sup> The study explored seven specific skill areas to determine the long-term impact that these had on the careers of AWARD Fellows, and in their institutions and communities.



Synthesized results of the AST impact study indicate that AST had great impact on the fellows, specifically in increasing technical and personal development skills (68 percent and 67.8 percent respectively) followed by growth in individual capacity building at 54.5 percent.

The AST component has been proven to have a transformative effect not only on individual women scientists, but also on their institutions and countries.

<sup>25.</sup> J. Lilley and S. de Villiers. Advanced Science Training: A decade of strengthening the research skills of African women through global partnerships, 2018.

# Impact of Advanced Science Training



#### Success Story



Before the AWARD Fellowship in 2008, Professor of Mycology Sheila Okoth did not have the capacity to fully conduct aflatoxin research, due to lack of equipment and limited skills. During her AST placement at Stellenbosch University, she acquired skills and necessary protocols to set up an aflatoxin laboratory. AST enabled her to acquire basic equipment to test for aflatoxin, a Reveal AccuScan III. Armed with newly acquired scientific skills, the protocols and the single piece of equipment, Okoth returned home with the objective of establishing an aflatoxin-testing laboratory at the University of Nairobi. She developed a joint proposal with her AST supervisor, which was successful and enabled her to purchase more advanced equipment, an ELISA reader. Okoth has since established a fully

equipped functional laboratory that is a national referral laboratory for aflatoxin testing in Kenya and that is attracting collaborations with various global research institutes, universities, and public- and private-sector organizations. The laboratory is a recognized center for Aflatoxin Proficiency Testing and Control in Africa, Asia, Americas and Europe (APTECA) and runs aflatoxin testing and qualification workshops for African trainees. The World Food Programme tests grains destined for humanitarian aid at this laboratory. These partnerships attract considerable funding to the University.

Professor Okoth is an external researcher for the University of Johannesburg, South Africa, the International Livestock Research Institute (ILRI) and the International Maize and Wheat Improvement Centre (CIMMYT). She is an internationally renowned expert in mycology, an authority on aflatoxin in East Africa and is currently President of the African Society for Mycotoxicology. Professor Okoth had not engaged with any of the institutions mentioned before her AST placement.



Dr. Flower Ezekiel Msuya, AWARD Fellow 2014, harvests seaweed for sale with women in Zanzibar. Her research focus is on improving quality and yield using innovative growing techniques.

# **Building leadership skills**

There is wide appreciation for the need to make the agricultural sector more genderresponsive, and concerted action from several actors is required. At the global level, United Nations SDG 8 seeks to promote inclusive and sustainable economic growth, employment and decent work for all.<sup>26</sup> Equally, the African Union Commission's Agenda 2063 emphasizes the need for inclusive growth, gender equality and youth employment to propel African countries to be among the best performers in global quality of life measures.<sup>27</sup> These principles have been cascaded at the regional and national development blueprints.

The success of these agendas relies heavily on the cultivation of a new generation of African leaders in food and agriculture. That leadership will be even more effective when women are highly represented, especially by those technically competent to generate the innovations needed by smallholders. The AWARD Fellowship is explicitly designed to support women agricultural scientists as they increase their visibility, and to empower them to serve as effective leaders within their research teams, institutions and communities.

Through AWARD's leadership training courses, AWARD Fellows learn to navigate



organizational gender barriers, leverage team talents, manage conflicts and appropriately use their influence. Leadership training supports them to build alliances and take risks, promote gender-sensitive policies and practices, and influence their institutions and communities on behalf of rural women smallholders.

Significant career progress has been recorded among the AWARD Fellows with most of the them occupying leadership positions at various agricultural research institutions. Preliminary results of a longitudinal survey conducted in August 2018 found that 68 percent of respondents have been promoted to senior or mid-senior leadership positions or appointed to policy-influencing positions since their participation in the AWARD Fellowship.

<sup>26.</sup> SDG 8: Decent work and economic growth. http://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-8-decent-workand-economic-growth.html.

<sup>27.</sup> African Union Commission's Agenda 2063. The first of the seven African aspirations is "A prosperous Africa, based on inclusive growth and sustainable development." The sixth aspiration is for "An Africa whose development is people driven, relying on the potential offered by people, especially its women and youth and caring for children." https://au.int/agenda2063/about.

#### Success Story



#### Developing capacity to lead differently at different levels

r. Ebinimi Joe Ansa is the Special Adviser to the Governor of Bayelsa State, Nigeria and Assistant Director for Research, NIOMR, Department of Aquaculture. In this high-level role, Dr. Ansa has direct influence on government decisionmaking. She has played a central role in promoting the idea of a Fish Village at Yenegwe, Yenagoa Local Government Area. The Fish Village, designed to create employment, lift incomes and engage the local community in making Bayelsa State a net exporter of fish, is built on 127 hectares of land contributed by the state government. The government built 500 fathom-deep fish ponds on the land. Ponds are run and managed by 4,000 members of various local community groups with special provision made for women and youth groups. A hatchery, feed

manufacturing mill and fish processing plant have been completed and will be run by a private-sector company under a private-public partnership agreement. Since her AWARD Fellowship in 2009, Dr. Ansa has also taken on roles as a member of the Aquaculture Working Group of the African Union – Inter African Bureau of Animal Resources, and is the coordinator of the country chapter of Nigerian AWARD alumni NiWARD.

Professor Fetien Abera , AWARD Fellow 2010, is another case that highlights the impact of individual leadership training on a home institution.

#### Success Story



Professor Abera is the only female plant breeder in Ethiopia and was the first female lecturer employed by Mekelle University in Ethiopia, 24 years ago. For most of those years she remained focused on her research in plant breeding. She says that before her AWARD Fellowship experience in 2010 she regarded gender and leadership as political issues that would potentially taint her career as a researcher. The AWARD Fellowship experience changed her perspective: she began to engage the university leadership in discussions and accepted leadership appointments.

"I have become more of an advocate, and am proactive for women in science," she says, adding

that she uses her status to advocate for women and provide incentives to young women scientists. Shortly after the fellowship, she accepted a position to establish and lead the Institute of Environment, Gender and Development Studies at the university and stayed on as director for five years. She was appointed full professor and has incorporated gender-responsive research in her approach to plant breeding. In 2016 she was appointed Deputy Vice-Chancellor of Mekelle University, the first Ethiopian woman to hold such position. She uses her status to advocate for the role of women in science and provides incentives to young women scientists.

These women also interface with communities; in Professor Okoth's case she works closely with local millers, while Professor Abera works with graingrowing cooperatives across Ethiopia. For sustainable and long-term transformation, actors along the value chain must be able to access appropriate innovation that help them respond to Africa's unique challenges. AWARD equips its fellows with the skills to facilitate interactions and foster partnerships with communities at all levels.

#### Success Story



Dr. Flower Ezekiel Msuya says the leadership training she received during her AWARD Fellowship period in 2014-2016 gave her the skills she needed to expand her work.

"This is when I actually started to work, to go out, to reach out to get additional funding for experiments," she says, singling out the training she received on building networks and partnerships. Dr. Msuya, who is the chairperson and facilitator at the Zanzibar Seaweed Cluster Initiative (ZaSCI), an initiative of the Pan African Competitiveness Forum, says 90 percent of seaweed farmers in Zanzibar Island are women and they have taken up most farming sites. Increased productivity is the only way that farmers can

boost earnings from seaweed farming. She has adapted the tubular net technology to enable the 25,000 seaweed farmers in Zanzibar to plant seaweed in deeper waters, which will improve the quality and volume of their harvest and increase their incomes.

Dr. Msuya obtained a series of grants and brought in the local government to support value addition industries and empower the community with knowledge. Partnership with non-governmental organizations (NGOs) brought in international expertise to train farmers and entrepreneurs while the Milele Zanzibar Foundation, an association of Zanzibari people in diaspora, came in to mobilize funds that ZaSCI uses to support small value addition industries. Dr. Msuya's work is gaining attention and she has been featured in global news reports that highlight her research, which increasingly touches the area of climate change as seaweed species disappear.

### Success Story



Dr. Jane Ambuko's work on postharvest handling of highly perishable foods is revolutionizing Kenya's agriculture and getting government attention. Her innovative cool boxes have been adopted and scaled out to smallholder farmers in Makueni and Embu counties, saving farmers millions of shillings in postharvest losses.

Ambuko, a 2013 AWARD Fellow, works with mango farmers in Makueni county. For years she watched them lose as much as 50 percent of their harvest each season, and was aggravated by knowing the solution is "as simple as managing temperature."

Given the twin problems of the high cost of cold room installation and the unreliable power supply

in rural areas, Ambuko developed the cool box, which relies on water evaporation and is specifically designed to extend the shelf life of perishable fruits and vegetables. Ambuko, a horticultural scientist and Senior Lecturer at the University of Nairobi, says postharvest food loss is the most neglected part of the agricultural supply chain. She quotes the FAO's alert that Africa loses the equivalent of \$4 billion worth of grain due to poor postharvest handling and one third of all food produced worldwide never reaches consumers. In 2013 Ambuko was appointed by the FAO Committee on Food Security to the High Level Panel of Experts (HLPE) for her efforts to reduce postharvest losses.

#### Lessons from the AWARD Fellowship: A Shared Conversation for Agricultural Research

The AWARD Fellowship has stimulated a new pulse in agricultural research and development between the so-called global south and north, inspiring movement toward a shared conversation about shared challenges.

Our partnership with an international network of institutions that share a commitment to inclusive agricultural research and development has seen a community of interest strengthen and grow around the AWARD Fellowship. This community is creating new pathways for delivering the benefits from agricultural research and development to resource-poor farmers and consumers in keeping with recommendations from the first Global Conference on Agricultural Research and Development (GCARD). The GCARD meeting identified the need for a collective focus on key priorities, increased capacity to share and make use of agricultural knowledge, better demonstration of the return from research as well as effective partnerships between research institutions and the communities they serve.<sup>28</sup> It requires a change in systems, institutional structures and processes of collaboration and partnerships to turn the focus on development impact and outcomes.

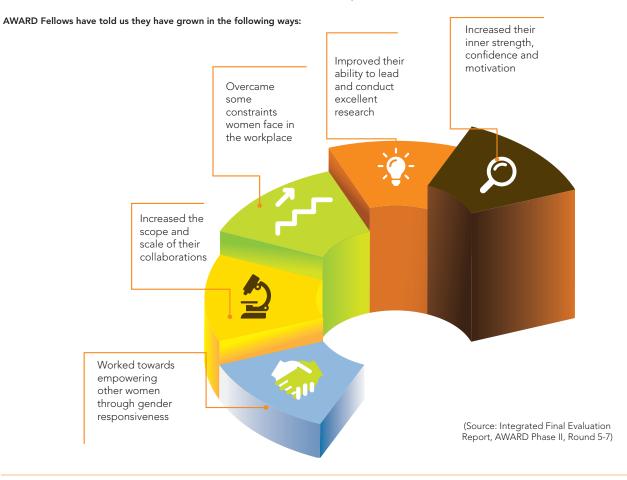
Through the AWARD Fellowship we have made entries into geographic silos in which agricultural research and development is often practiced, opening opportunities for exchange. This new sphere allows scientists who rarely interacted before to collaborate in new ways. It generates abundant opportunities for the transfer of knowledge and skills. It demonstrates the possibilities of working together, leveraging scarce stateof-the-art technologies across the world and bringing these to bear on real world problems affecting communities.

The gains of the AWARD Fellowship are not only one-way. As leading scientists from the continent take on the roles of AWARD Fellows, mentors and trainers, they have been ambassadors, bringing intellectual rigor from the African continent to their dialogue with scientists in host institutions and beyond. They are visible as they shape and influence global policy and practices through their appointment to serve on regional and international research and policy institutions and think tanks. They add fresh perspective, bringing their unique experiences shaped by their cultures, indigenous knowledge, local approaches, priorities and concerns to a global platform.

 28. 2014, Final Report Summary - ERA-ARD II (The Agricultural Research for Development Dimension of the European Research Area). https://cordis.europa. eu/result/rcn/147476\_en.html Accessed 11/04/2018. From this expanded vantage point, scientists, in both the north and the south, now value their research in the context of global concerns including food security, global trade in food and agricultural produce and climate change.<sup>29</sup> Assessment of the AWARD Fellowship further demonstrates that the scientific community is finding convergence in their research goals and increasingly working together on joint grant-writing and fund-raising proposals for research with individuals and with institutions.

With the introduction of women scientists from Asia, the AWARD Fellowship also makes available opportunities for scientists from developing countries to have a conversation of their own on agricultural research and development.

#### Benefits of the AWARD Fellowship



29 2010, GFAR, A. Maru. Report of the Parallel Session to the GCARD Plenary Session, Rome. http://www.fao.org/docs/eims/upload/277056/ Enabling\_Further\_Fast\_Growing\_Economy\_Countries\_Role\_in\_ARD\_Plenary\_ajm.pdf. Accessed 11/04/2018.

# Gender-Responsive Agricultural Research and Development (GRARD)

Evidence from the case studies presented in this report illustrates how effective the AWARD Fellowship is. The fellows have experienced tremendous career growth, have played critical roles in enhancing the capacities of the institutions in which they work, and have greatly influenced decisions affecting agricultural research at the national, regional and international levels.

Despite the impressive achievements of the AWARD Fellowship, recent data from ASTI indicates that the gender gap in African agricultural research is still substantial, although the number of female researchers in SSA grew from 2008 to 2014.<sup>30</sup> A newly published study declares that it may take up to 320 years before an equal number of men and women scientists are working in senior roles.<sup>31</sup>

"Gender responsiveness offers a powerful tool through which agricultural researchers can be intentional in addressing the constraints of African farmers at the margins, especially women and youth,"

Dr. Yemi Akinbamijo, Executive Director of FARA, said in a keynote address during the 2017 launch of GRARD.

That is why there is still room for more to be done, for sustainable transformative solutions to be realized.

AWARD appreciates that transformation is not achieved solely by increased numbers, but by understanding the needs, priorities and realities of the targeted end users.

AWARD recognizes that the effectiveness of these AWARD Fellows will continue to be compromised if the structures and institutions within which they operate remain unchanged and unresponsive to the needs of women scientists. African institutions struggle with recognizing, accommodating and creating continual growth opportunities for women scientists.<sup>32</sup> This limits the potential of fellows and the ability of the institutions they work in to engage fully with the agricultural transformation agenda. It points to the need to encourage agricultural research institutions to provide gender-equitable environments that offer professional and leadership opportunities to both men and women.

AWARD defines GRARD as research that addresses the distinct needs and priorities of a diversity of both men and women along the entire agricultural value chain. GRARD



<sup>30.</sup> N. Beintema, An assessment of the gender gap in African agricultural research capacities, Journal of Gender, Agriculture and Food Security, Vol 2, Issue 1, pp 1-13, 2017.

32. AWARD Strategy 2017 – 2022, pp. 25-26.

A Decade of Advancing Inclusive Agricultural Research: The AWARD Story

New study says the gender gap in science could take generations to fix. Luke Holman. April 20, 2018 https://theconversation.com/new-study-says-thegender-gap-in-science-could-take-generations-to-fix-95150.

allows a focus on innovation that addresses the constraints of those African farmers left beyond the fringes of research initiatives. It offers the potential to maximize the efficiency and effectiveness of agricultural research and development by increasing the scale, scope and sustainability of impacts.

GRARD also supports research institutions to build and effectively leverage the talents of more diverse and inclusive teams. It draws on the experience and lessons from the fellowship program to support institutions to recruit, retain, develop, successfully manage and use the talents of these teams. A baseline study established the parameters, tools and processes used to rollout GRARD along with the pool of experts that support research institutions in their journey.

Following the 2017 launch of GRARD, stakeholders from across the continent convened to identify priorities for action for GRARD and commit to implementation.

The first step toward GRARD implementation involves joint action between AWARD and the identified institutions to implement an agreed set of interventions.

GRARD supports agricultural research institutions to:leverage talents of diverse research teams;

• grow their ability to conduct research that is more inclusive, better targeted and

better designed to respond to the needs and priorities of a diversity of men and women across agricultural value chains; andstrengthen prioritization of gender and diversity at the workplace and in the overall research process; from design, implementation to dissemination.

For this to happen, it is important to work closely together to build opportunities and manage emerging challenges. The selection of agricultural research institutions to partner with is based on their appetite for and willingness to implement the GRARD initiative as part of their priority focus areas.

The joint institutional collaborations are geared to:encourage diverse and multicultural workplace;promote balanced diversity in leadership;

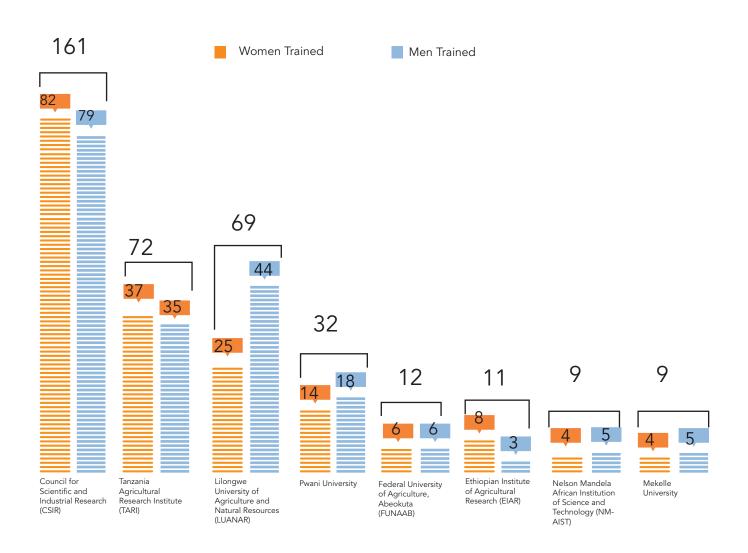
- develop and strengthen the capacity of staff members and other key stakeholders in the agricultural and related sectors;promote synergy and diversity in research as well as evidence-based policy making; and
- encourage open dialogue and transparent communication on gender responsiveness and institutional transformation.

#### Institution-specific Interventions

Through GRARD, AWARD designs specific interventions to the institutions, tailored to the needs, language and social/cultural fit. Below are some examples.

Interventions	Activities
Institutional needs assessments	Diagnosis of institution's culture/approach on GRARD
Institution-based interventions	Identification and prioritization of key GRARD activities (per institution) recommended for support
	Grants to support the implementation of prioritized GRARD activities
	• Coaching clinics (online/offline) to support the implementation of GRARD activities
	Progress reporting
Capacity building and strengthening	AWARD certified training courses
	Special training initiatives
	In-depth training courses
Policy engagement/ dialogue	Consultations with relevant national and regional bodies
	• Support to the AWARD country chapter events and sustainability
Strategic analysis to fill knowledge gaps on GRARD	• Development and implementation of collaborative research proposals on GRARD and related topics
	• Continuous identification and dissemination of GRARD- relevant strategic analysis to guide policy processes
	Production of pertinent documents
Monitoring and evaluation accountability mechanisms	• Development and implementation of an effective monitoring and evaluation (M&E) framework with specific, measureable, achievable, realistic and timely indicators along with comprehensive guidelines
	Production of an annual trends report on GRARD
	• Review of results-based monitoring and accountability mechanisms at the institutional level
Knowledge management, communications	• Establishment of interactive knowledge platforms for disseminating relevant knowledge and tools on GRARD and for conducting relevant research and analysis

## **GRARD** Training for Partner Institutions



Since GRARD's inception in 2017, AWARD has established partnership agreements with eight African institutions:

- CSIR, Ghana;
- Ethiopian Institute of Agricultural Research (EIAR);
- Federal University of Agriculture, Abeokuta, (FUNAAB) Nigeria;
- LUANAR, Malawi;
- Mekelle University, Ethiopia;
- Nelson Mandela African Institution of Science and Technology (NM-AIST), Tanzania;
- Pwani University Kenya; and
- Tanzania Agricultural Research Institute (TARI).

Since inception, GRARD has provided customized training courses for 375 researchers from the eight institutions. The GRARD approach holds great transformative potential for strengthening agricultural research in support of Africa's sustained and inclusive economic growth.

#### **Country Chapters**

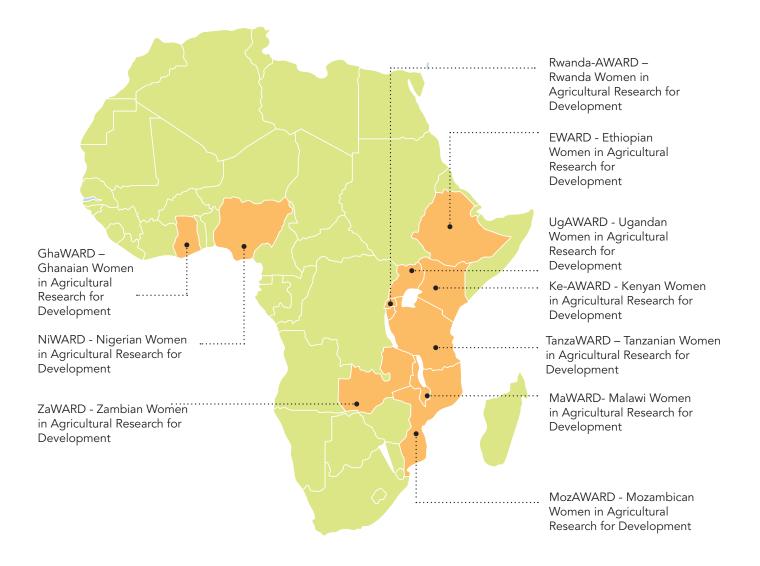
AWARD country chapters bring together AWARD alumnae, mentors and other individuals interested in driving the agenda for gender-responsive agricultural research and development. Country chapters set their own priorities and agendas, and are integral to deepening and embedding GRARD. They catalyze networks for advocacy, knowledge sharing and intra-country collaboration and amplify the impact of AWARD's work, taking it into local communities and institutions where fellows live and work. AWARD country chapters are taking the call for gender responsiveness to the ground in their respective countries. Although most are still setting up their institutional structures, they have made their presence felt in various ways.

Zambian Women in Agricultural Research and Development (ZaWARD) has an agreement with Waterfalls Development Company that has provided them with 50 hectares of land on which to carry out agricultural projects that benefit women. ZaWARD has also taken on role-modeling in schools across the capital of Lusaka, encouraging young people to see careers in agriculture as a valuable venture. The ZaWARD secretariat is housed by the Indaba Agricultural Research Institute and they have also partnered with Zambian agriculture research institutes and the University of Zambia as well as development partners.

In neighboring Malawi, the Malawian Women in Agricultural Research and Development, MwAWARD has also taken up role-modeling sessions for secondary schools and started a "buy a science book" project with donations distributed during the role-modeling events. Currently hosted by LUANAR, MwAWARD will be training scientists and graduate students in leadership and genderresponsive agricultural research. In this way, the lessons they learn through the AWARD Fellowship will be expanded and entrenched at home.

To date, AWARD has facilitated the establishment of 10 country chapters.

## AWARD Country Chapters



#### Gender in Agribusiness Investments for Africa (GAIA)

Gender in Agribusiness Investments for Africa (GAIA) identifies, spotlights and supports the growth of those agribusinesses with the potential and commitment to bridge the gender gap in African agriculture.

If Africa is to realize inclusive, agriculturedriven prosperity, there is a critical need to bridge the gap between smallholder farmers, agricultural research, agribusiness and the agribusiness investment community. GAIA is AWARD's intentional move to connect these key players to maximize adoption, commercialize agricultural innovations and build sustainable agricultural value chains for the continent.

Agribusinesses are not only important creators of jobs, they are a sustainable way of ensuring food security. Africa's agribusiness sector needs a steady pipeline of innovations to maintain a competitive edge. AWARD recognizes that connecting key players and closing the gender gap in agribusiness in Africa presents a great opportunity for speeding up agricultural production and economic growth. A gender-inclusive agricultural value chain will reach unserved and under-served populations and support efforts to improve agriculture, address poverty and tackle food security.

AWARD partnered with the African Development Bank (AfDB), Intellecap and African Agribusiness Incubation Network (AAIN) to launch the GAIA initiative. GAIA identifies, spotlights and supports AgTech innovators whose agribusinesses address the needs and priorities of a diversity of both men and women across the entire agricultural value chain.

GAIA focuses on technologies that address major constraints in African agriculture such as closing yield gaps in crop and livestock value chains, reducing postharvest losses and improving market inefficiencies. It also gives special focus to technologies that demonstrate clear benefits toward marginalized groups of people, including women smallholders and women involved beyond the production end of agricultural value chains. Through the GAIA initiative, AWARD has introduced a critical conversation on the importance of gender considerations within Africa's agribusiness sector, and agricultural innovation sector more broadly.

Through its intensive boot camps, GAIA implements the AgTech Innovation Challenge and a series of other interventions to competitively selected agribusinesses. The deliberate infusion of gender throughout each training module is the salient difference of these boot camps as it enables participants to understand the value of including the diversity of men and women clientele. The GAIA boot camps offer rigorous customized training and an entrepreneur showcase, linking innovators to investors and technical experts.

#### GAIA Taking Agribusiness Solutions to Market



Twenty-five entrepreneurs from eight different countries came together to share their innovations in the 2017 AWARD AgTech Innovation Challenge for Southern and Central Africa held in Lusaka, Zambia. After an intensive two-day boot camp on business models, value proposition and the importance of gender in agribusiness, the top six entrepreneurs presented their work to to a panel of judges and guest investors. Countries represented include Cameroon, the Democratic Republic of Congo, Madagascar, Malawi, Mozambique, South Africa, Zambia, and Zimbabwe.

92%

of participants found the boot camps as highly informative for their business growth 90%

of participants in GAIA bootcamp improved their ability to present an elevator pitch 85%

of participants rate the networking opportunity offered by the boot camps as critical 72.5%

of participants had higher understanding of the need for gender in agribusiness innovations Investors are in turn, trained to understand genderdimensionswhenmakinginvestments. In a pilot phase of GAIA in late 2016 and early 2017, AWARD brought together a total of 76 participants from 40 countries across Africa for the boot camps. Innovators were trained to navigate the investor landscape, define a value proposition for their business, pitch, understand business modeling, and conduct a gender analysis of every aspect of their business. Based on learning from the first two regional Challenges held in Nairobi and Accra, the third Challenge in Lusaka saw AWARD partner with the World Intellectual Property Organization, WIPO to add a module on intellectual property. Through WIPO support, several GAIA participants traveled to Casablanca, Morocco in November 2017 and took part in a regional forum addressing Innovation and Intellectual Property as Engines for Competitive Agribusiness: Empowering Women Researchers and Entrepreneurs in Africa.

More than half of the selected "agripreneurs" were in their pilot phase, with less than three years in operation since their founding.

# Catalyzing connections, empowering agripreneurs

A follow-up survey on the enterprises established that a significant majority of the participants (82 percent) reported gains in their skills and ability to prepare and present a business pitch after the boot camp. Participants reported that the GAIA boot camps presented them with valuable networking opportunities that facilitated peer learning and support. These gains have been established to have a long-lasting effect, serving as a springboard that has enabled the agripreneurs to access more opportunities to grow their businesses.

33. Gender in Agribusiness Investments for Africa (GAIA) https://www.youtube.com/watch?v=b6gJu1JhLsU.

34. AWARD Youtube Channel. Gender in Agribusiness Investments for Africa (GAIA) https://www.youtube.com/watch?v=b6gJu1JhLsU.

#### Success Story



Peter Awin, co-Founder of Cowtribe Ghana participated in the 2016 GAIA AgTech Innovation Challenge boot camp in Accra, Ghana. The GAIA boot camp has really been useful in introducing us to the critical issues that affect gender and allowing us to apply it to our business model and help it grow, knowing that we are solving these issues from day one of our business."<sup>33</sup>

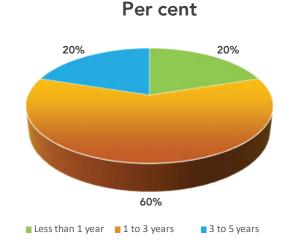
Since his participation in GAIA, Awin won a €15,000 prize at PitchAgriHack competition held in Kigali, Rwanda organized

by Technical Centre for Agricultural and Rural Co-operation (CTA). CTA was also one of the investors invited to the GAIA boot camp. Cowtribe is Africa's first on-demand animal vaccine delivery service provider, using mobile phone technologies and cloud-based computing to predict when and where farmers will need vaccines for their animals and to connect them to providers for timely and reliable service delivery. More than 9,000 vaccine requests have been fulfilled.<sup>34</sup>

GAIA ensures that researchers can maximize their return on investment by connecting them to entrepreneurs, investors, and agribusiness industry players ready to scale up research outputs. It also serves as an opportunity for AWARD Fellows to showcase their innovations to AgTech businesses and connect to the value chain helping to close the gap between innovators and the market.

GAIA also connects innovators with privatesector organizations and other institutions interested in taking up new AgTech solutions with potential for widespread adoption and/ or adaptation in different contexts.

# Years of operation of the enterprises at GAIA Bootcamps



### Success Story



Bezawit Worku, an AWARD Fellow 2014 is the Managing Director of Agri-Link – a start-up social enterprise that works to increase farmers' income by linking smallholders to the growing number of agribusinesses needing raw materials in Ethiopia. She says the AWARD Fellowship helped her identify her purpose picture her medium and long term goals while her participation in the GAIA AgTech challenge helped her bridge the gap to the next level.

Understand what will be necessary in terms of resources, investor interests and technology in order to realize her goal. She says she was empowered and inspired by meeting other entrepreneurs and this gives her a pan-African network.

#### Success Story



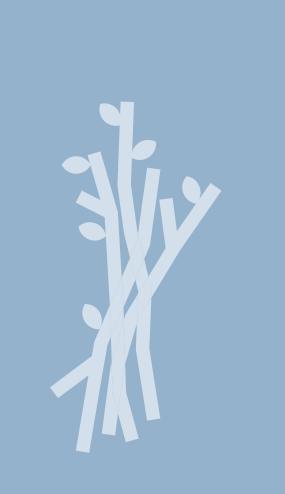
Ene Isosie Unoogwu, an agripreneur from Nigeria who participated in one of the GAIA boot camps, won the agribusiness category in the recently concluded Women in Africa Global platform held in Morocco in September 2018. Unoogwu has developed an innovation that is curbing postharvest losses, leveraging on renewable energy sources in powering our cold storages from farm to market.

She says that the GAIA boot camp built her confidence in developing, packaging and pitching business ideas, and that helped her immensely. "The GAIA boot camp participation

was the first time that what I was doing gained attention. Winning the category comes with a lot of benefits like some investments and other exposures," says Unoogwu.

The Pan African character of GAIA provided AWARD's first experience administering a bilingual intervention with communication in both English and French and A-Team Trainers were instrumental in giving French support for the francophone innovators. The lessons learned from GAIA now inform and support the AWARD Fellowship and has seen increasing drive to build bilingual skills within the secretariat of AWARD.

Implementing GAIA saw AWARD grow in new directions. AWARD introduced online learning through pre-course webinars on gender and business as a means to augment the face-to-face boot camp sessions.





# Underpinning it All -Crosscutting Initiatives



Fellows from West Africa participate in the AWARD Women's Leadership and Management Course held in Ghana in 2016.

# **Training Sized to Fit**

AWARD training is a crosscutting initiative that continues to incorporate new topics and new elements in its training approaches. AWARD training designs customized learning experiences focused on building the leadership, mentoring, scientific research and technical gender skills of Africa's agricultural research workforce and decision makers.

AWARD's made-to-measure training is consistently singled out as one of the most transformative and appreciated aspects of our work. Training of various kinds underpins and cuts across the AWARD Fellowship, GRARD and GAIA initiatives, and has established itself as a unique and reliable brand in the agricultural research and development space.<sup>35</sup>

"People are different", says Pauline Bomett, Senior Manager, Leadership and Training, adding that the need to tailor-make training to ensure relevance is very important given the differences between individuals and communities. "Even with the well-established AWARD Fellowship we have to adapt the training. The fellows we are training now are younger than those in earlier groups and they have different perspectives, needs and interests."



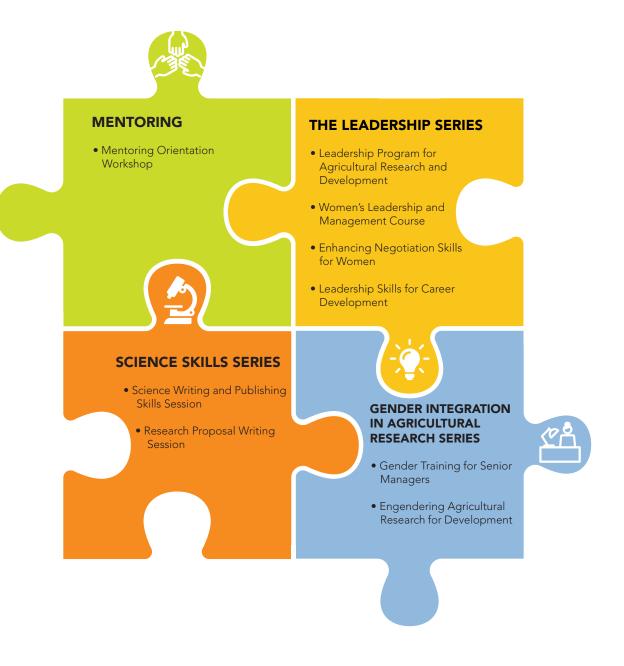
The design of AWARD courses stands on research and analysis. Establishing the fellowship as a unique career careerdevelopment program requires AWARD to tailor-make specialized courses and train people with specific skills and personal outlook to deliver them.

Identification and training of suitable trainers to deliver fellowship courses is integral to the design of the courses and processes. While an abundance of trainers for technical topics exists, few were identified with the ability to deliver soft-skills training that is core to most AWARD courses. Training of Trainers (ToT) for the initial fellowship was benchmarked against international standards given that equivalent training was not available on the continent. Funders invested heavily to bring in an international team for ToT to establish the initial pool of five trainers based in Africa.

Available to participants globally, AWARD training courses cover a broad base of knowledge and skills designed to leave participants enlightened, empowered and inspired, enabling them to make significant positive impacts on their careers and on the institutions for which they work. Over the last 10 years, AWARD has developed nine training courses clustered into four categories as shown in the following figure.

35. AWARD Strategy 2017 - 2022.

# Courses offered by AWARD



### **Customized Training**



Faculty members from various Mozambican universities take part in AWARD's LEPARD course in June 2017.



242 AWARD training courses delivered 7,361 Individuals trained globally The AWARD training courses have not only benefited and impacted the AWARD Fellows but have also had a wide reach in the agricultural research landscape in Africa. To date, 242 training courses have been offered to more than 7,300 participants globally.

While most of AWARD's work is focused on women scientists from across the continent, AWARD's training initiative is global in scope, attracting participants from non-African countries, from CGIAR centers and other international agricultural research and development institutions.

Subsequentchangesinthedonorenvironment landscape and priorities, technological shifts and opportunities presented by the global focus on food security has made it necessary for AWARD's training initiative to review its structure, product and service offering as well as internal and external operating processes to achieve its mission.

A robust pool of African Trainers Embracing the AWARD Mission (A-TEAM) is critical to the success of AWARD's training work. Identifying, training, empowering and aligning the A-TEAM to the AWARD 2017-2022 strategy has remained a critical component of the revamping of the AWARD training strategy. AWARD training has built a strong cadre of 36 trainers from 12 countries, with excellent facilitation and presentation skills and extensive global experience in the agricultural research and development context.

#### **AWSEM Model**

Measuring empowerment levels of African women scientists



A Decade of Advancing Inclusive Agricultural Research: The AWARD Story

#### **Evaluating to Learn and Adapt**

AWARD is a learning organization with an established adaptive and comprehensive monitoring, evaluation and learning (MEL) system that employs carefully designed tools and approaches. AWARD's MEL system has undergone various changes through time to adapt itself with contemporary approaches, tools and technologies. It has been developed to support ongoing real-time monitoring for reflection, self-evaluation and two-way learning.

AWARD's adaptive MEL system provides information for contextual decision making and offers knowledge and learning. These are important not only for AWARD, but for fellows and partners. A 2017 AWARD study found that because it is critical to use credible ways to understand empowerment, continuous and rigorous monitoring and evaluation using a mix of methods and approaches is fundamental.<sup>36</sup>

Measuring and reporting changes in human capacity in a scientific way is one of AWARD's most ambitious and ground-breaking pursuits. Over the years the approach has changed from using outcome mapping as the main monitoring system to a mixed method approach that provides detailed concrete data to show the extent to which the target group had been influenced.

#### The AWSEM Model: Measuring Women Scientists Empowerment

From the onset of its MEL efforts, AWARD understood the importance of measuring the extent to which AWARD Fellows were empowered to become the type of influential women leaders that Africa needs. However, there were limited tools for measuring empowerment, not only because there was no clear definition of the term itself, but also due to a lack of a well-defined conceptual framework. AWARD established the African Women in Science Empowerment Model (AWSEM). The adjacent image summarizes the AWSEM framework, which is premised on five "powers". This framework is used to guide the design of evaluation form, as well as the empowerment analysis. AWSEM is used together with several other tools. AWARD collects information continuously and encourages fellows to reflect periodically on their progress in the fellowship.

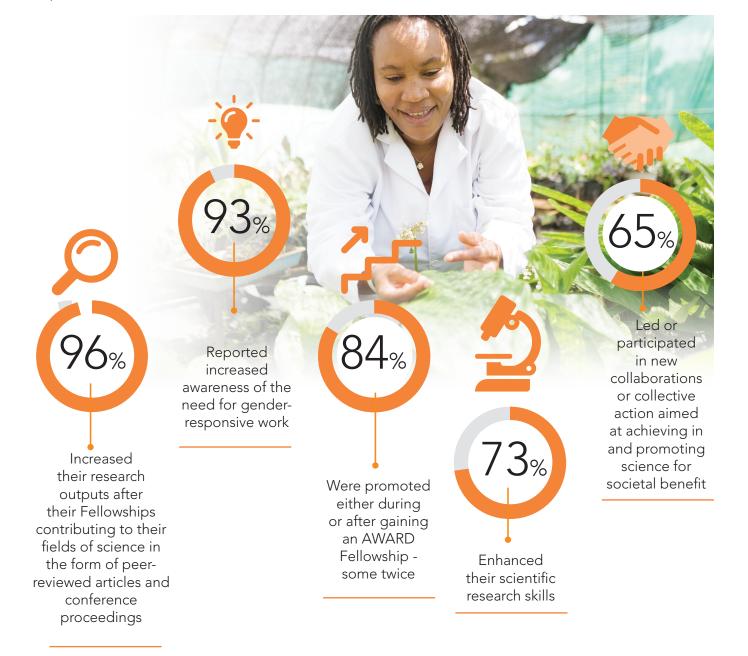
The powers include the following:

- 1. Power from within;
- 2. Power to do;
- 3. Power over;
- 4. Power with; and
- 5. Power to Empower.

<sup>36</sup> M. Mentz. The benefits of both worlds: Towards an integrated mixed-methods approach for evaluating women's empowerment. Agri-Gender - Journal of Gender, Agriculture and Food Security, Vol 2, Issue 1, pp 14-34, 201710.19268/JGAFS.212017.2.

# Empowerment of AWARD Fellows Measured Using AWSEM

Analysis of AWARD data reveals that women scientists have been empowered as follows:



**End of Fellowship Surveys** are conducted during the AWARD Fellowship and measure how much AWARD Fellows have changed regarding specific result indicators across time. This form of monitoring is based on the results framework and uses the AWSEM model.

**Progress Monitoring,** also called Mid-term Evaluation, is done halfway through the AWARD Fellowship and takes the form of a meeting session.

**Continuous Monitoring** takes different formats and AWARD uses an online data collection system. AWARD has a wellorganized Management Information System where vast amounts of data and knowledge collected from AWARD activities and processes are collected and stored in accessible formats and continually inform the work that AWARD does, encouraging experimentation and change that supports AWARD's continuing relevance in agricultural research and development.

**Participatory Sessions.** AWARD Fellows are periodically invited to reflect on their

progress, challenges and lessons during their AWARD Fellowship. The AWARD Fellows PRM also supports MEL as a point for reflection.

**Longitudinal Surveys** are an important tool for evaluating the long-term high-level impact expected of the AWARD Fellowship. In this regard, we heavily rely on fellows' responses and their attribution of change to the AWARD Fellowship. These surveys capture the progress of AWARD Fellows in different spheres including career, scientific publications, leadership positions they hold, as well as their influence and role in community, impact on farmers and agricultural value chains.

AWARD has measured outputs and immediate outcomes for all institutional training courses using Pre- and Post-Training Surveys. AWARD also conducts Follow-up Surveys after training to measure outcomes.

Most of the data presented in this report is drawn from AWARD's MEL system.



AWARD partnered with the Islamic Development Bank, the Bill & Melinda Gates Foundation and the International Center for Biosaline Agriculture to deliver a leadership course for the Young Arab Women Scientists Leadership (TAMKEEN) in February 2017.

# **Partnerships: When Common Goals Meet**

Partnerships have been instrumental in AWARD's mission of investing in African women scientists, agricultural research scientists and agribusinesses to deliver gender-responsive agricultural research and development. These partnerships demonstrate not only how agricultural research and development actors can together contribute to agriculturedriven prosperity for Africa, but also how strategic partnerships cascade to multilevel partnerships and catalyze networks.

Partnerships allow AWARD to co-create the future of agricultural research and development with others. We have cultivated splendid partnerships to deliver dynamic, catalytic and transformative collaborations with impactful results. From the numerous examples of AWARD partnerships, a we present a handful to sketch our experiences with partnering.

Since 2009, 44 of the world's leading research institutions from 25 countries globally have partnered us to host research placements for AWARD Fellows.<sup>37</sup> These top research institutions support the building of scientific skills of women scientists, because like us, they are committed to bridging the gender gap in agricultural research by strengthening the pipeline of women entering leadership positions across the sector.

#### Scaling out the AWARD Fellowship

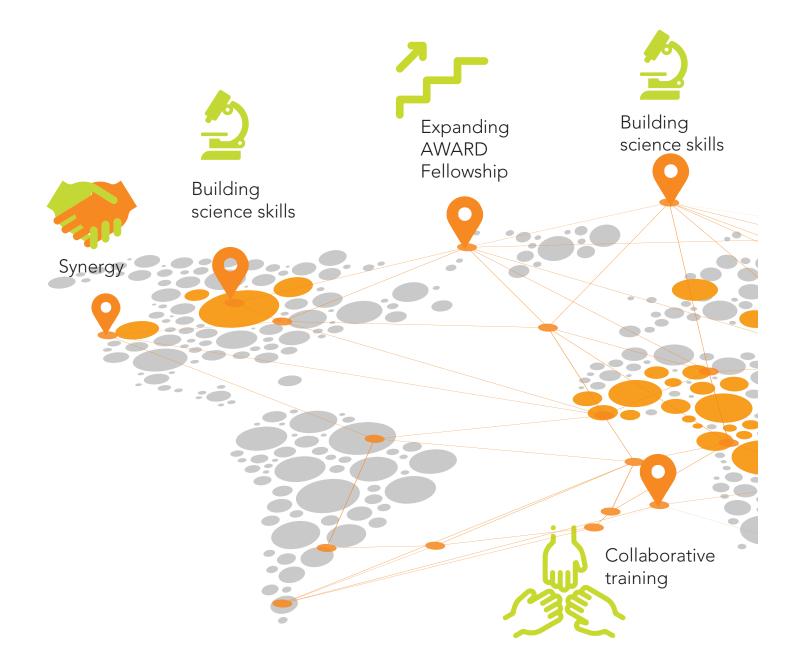
While AWARD's women's career development initiative was designed for African women scientists, the need to accelerate the careers of women scientists has been identified as a global concern. Similar patterns around gender gaps in scientific leadership and publishing have been observed across the world.<sup>38</sup> At AWARD, coupled with increased demand for our career-building initiative that has had tremendous impacts over the last years, we see this challenge as an opportunity to cultivate and catalyze partnerships to extend the fellowship experience beyond Africa. Our collaboration with the Australian Centre for International Agricultural Research (ACIAR) enabled the AWARD Fellowship to expand into the Indo-Pacific region. For the first time in 2018, the AWARD Fellowship was awarded to women scientists from Bangladesh and Fiji, under a shared vision between AWARD and ACIAR.

What more can be done? To address some of the systemic inequalities leading to the gender gaps, scientific research institutions must make decisive actions to steer their institutional learning and development toward gender-responsive options. A novel partnership in 2017 with ILRI offered the fellowship experience to ILRI women scientists.

<sup>37</sup> AST impact study: https://awardfellowships.org/award-publications/advanced-science-training-a-decade-of-strengthening-the-research-skillsof-african-women-through-global-partnerships/5b35081eb3138doc532773482/.

<sup>38</sup> https://www.the-scientist.com/tag/gender-gap.

# Partnerships





AWARD's newest initiative, the One Planet Fellowship, is a partnership between BMGF, the BNP Paribas Foundation and Agropolis Fondation. The One Planet Fellowship will see AWARD manage a \$15 million, five-year initiative aimed at building a vibrant, highly connected and intergenerational network of African and European scientist leaders who are equipped to lead next-generation research in climate adaptation. The One Planet Fellowship will see the AWARD Fellowship model customized and replicated for men (and women) and European scientists (in addition to African scientists). This partnership recognizes the critical role of agriculture in climate adaptation and the vulnerability of Africa to climate change. It will build a network of outstanding climate adaptation researchers in Africa and Europe to address the challenge through research into sustainable interventions.

#### Customized Learning Experiences to build Institutional Capacities

In 2017, the International Center for Biosaline Agriculture (ICBA) together with BMFG and the Islamic Development Bank, piloted a novel leadership program for Arab women scientists in the Middle East and North Africa region. Under the TAMKEEN initiative targeting Algeria, Egypt, Jordan, Lebanon, Morocco, Oman, Palestine, Tunisia and the UAE, AWARD designed and delivered a women's leadership and management training course for Arab women scientists in agriculture.

We collaborated with the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) and Gender-Responsive Researchers Equipped for Agricultural Transformation (GREAT) to deliver gender-awareness training for 78 of the top management team of Uganda's National Agricultural Research Organization (NARO). The participants were trained on gender policy, implementation frameworks and review of standard operating procedures in the context of their individual institutions.

Our partnership with regional organizations such as the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is essential for entrenching AWARD's impact in the higher learning institutions in Africa. AWARD not only shares in RUFORUM's vision of a vibrant agricultural sector linked to African universities, but also strongly supports its mission of strengthening the capacities of universities to foster innovations responsive to demands of smallholder farmers. The **RUFORUM-AWARD** partnership has been uniquely designed to build a sustainable pipeline of agricultural research transformation, by permeating different levels of institutional and research organizations. The AWARD leadership series courses have been customized and delivered for senior university leadership, targeting vice chancellors and their deputies and deans of students. These are delivered annually at the RUFORUM conferences or its annual general meetings.

Under an eight-year RUFORUM project, "Training a Generation of AgLeaders for Agricultural Transformation in Africa (TAGDev)", we are delivering tailored mentoring, leadership and science writing training courses for BSc and MSc students in various agriculture fields and drawn from nine African countries (Ghana, Kenya, Malawi, Nigeria, Rwanda, South Sudan, Tanzania, Uganda and Zimbabwe). As part of the training, the students have developed and presented their PRM statements.

TAGDev is a partnership between The MasterCard Foundation and RUFORUM seeking to transform African agricultural universities and their graduates to better respond to developmental challenges through the enhanced application of science, technology, business and innovation for rural agricultural transformation. Since TAGDev's inception in 2016, AWARD has trained 115 students.

Our partnerships enable us to efficiently optimize our resources and extend our reach. For example, the CGIAR centers are among the key AWARD partners that have enormously contributed to our global footprint. Most recently, ICRAF, ILRI, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), the International Water Management Institute (IWMI), IFPRI, IITA have partnered with AWARD to offer the leadership series training courses to their and other CGIAR researchers.

# Catalyzing networks and collaborations

In addition to advancing common agendas, AWARD partnerships are also influential in paving the way for other partnerships extending far beyond AWARD, with the resulting momentum of this interconnected network feeding back into the agricultural research and development sector. The John Innes Centre became AWARD's first U.K.based partner for AST through just such a confluence of objectives and interests, and new partnerships have since grown out of emerging partnerships.

Ensuing from the BecA-ILRI Hub-AWARD partnership, the AWARD-JIC partnership has not only increased the number of women scientists with outstanding scientific skills, it has also resulted in more intercontinent collaborations. Dr. Rose Nyachomba Kigathi, a 2015 AWARD Fellow, recently established a partnership between Pwani University and JIC, resulting from her AST placement at JIC.

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# Acknowledgments

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African Women in Agricultural Research and Development (AWARD) is working toward inclusive, agriculture-driven prosperity for the African continent by strengthening the production and dissemination of more gender-responsive agricultural research and innovation. We invest in African scientists, research institutions, and agribusinesses so that they can deliver agricultural innovations that better respond to the needs and priorities of a diversity of women and men across Africa's agricultural value chains.

For more information, visit www.awardfellowships.org.

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