

Partnership to Strengthen Leadership Capacity of Women in Agriculture and Climate Research in Africa

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Info Note



Key messages

- Women are less represented in agricultural research and development sector representing only 25% of agricultural scientists in Africa in the last decade, and a much lower proportion of decision makers on agriculture and climate change at institutional, national, and global levels.
- Research activities on climate change and outputs must be inclusive, gender-oriented and promote gender equity to enable women scientists to make a greater contribution and be represented at all levels.
- CORAF, together with Alliance Bioversity International and CIAT (ABC) and its partners (research centres, universities, and regional coordination institute) across Africa, and through AICCRA project, capacitated women scientists from Africa in Leadership in Agriculture and Climate research.
- Leveraging on CORAF-ABC collaboration, CORAF plan to extend the women leadership training to other female scientists in WASCAL, and in research institutes across the continent, including CORAF region, CCARDESA region, AFAAS region, ASARECA region.

INTRODUCTION

Science, technology, engineering, and mathematics (STEM) are widely regarded as critical to the nations' economy. Workers in science and engineering are critical to economic innovation and productivity (Hill et al., 2010). Although women make up half of the population, they remain underrepresented in most STEM fields (Cheryan et al., 2017). The situation is considerably different from one region to another region in the world, particularly at short-cycle programs (ISCED 5) . Sub-Saharan Africa is the only region where women are underrepresented at all levels, and particularly at more advanced education levels (UNESCO IESALC, 2023). The trend is the same in agriculture sector where women made up only 25% of agricultural scientists in Africa in the last decade, and a much lower proportion of decision makers at institutional, national, and global levels.

In addition, it is well known that scientists and engineers are working to solve the world's greatest challenges, such as climate change, which is having a major impact on the agricultural sector, particularly rain-fed agriculture in Africa. Unfortunately, people strongly associated science with men more than women, including in nations where women were approximately half of the nation's science majors and employed researchers (Nosek et al., 2009; Miller et al., 2014). Among the causes of such a consideration, we can cite (i) widespread stereotypes typically portray STEM as male gender-typed (Miller et al., 2015; Nosek et al., 2009), (ii) gender bias against women in STEM fields (Moss-Racusin et al., 2012), (iii) social identity threat, (iv) the perceived incompatibility between communal (other-oriented) goals (more typically

endorsed by women) and STEM work (Diekman & Benson-Greenwald, 2018) and (v) the work/life balance.



Given women key roles in agriculture, the potential of women scientists to contribute to the debate on and solutions for climate change and to influence policies regarding climate adaptation and mitigation can be harnessed. It's acknowledged that when addressing climate change, principles of gender equality and empowerment of women should be respected, promoted, and considered (Elwell et al., 2023). Thus, creating and enabling attractive environment and retaining more women in the STEM workforce will maximize innovation, creativity, and competitiveness (Hill et al., 2010). Gender equality in higher education and research is essential for women's rights and social justice, providing all bright minds with the opportunity to contribute to solving the world's most pressing challenges (e.g. climate change) and advancing human progress (UNESCO IESALC, 2023). Synergistic links between climate change adaptation measures and gender equality can enable inclusive development of gender-transformative climate action (Resurreccion et al., 2019) and inclusive development that 'leaves no one behind' (Agarwal, 2018). For climate change adaptation actions to have positive impacts on gender equality, gender-focused targets must be intentionally brought in at the prioritization, designing, planning, and implementation stages (Roy et al., 2022).

Although, the participation of women in agricultural sciences is progressively increasing in most regions of the world (Huyer, 2015), women remain less represented in many international and national organizations devoted to agricultural research, including in the CGIAR Centers, regional and national research institutes, and universities. For this, CORAF and Alliance Bioversity International and CIAT through AICCRA (Accelerating Impacts of CGIAR Climate Research for Africa) project found important to contribute to reduce this gap.

The synergy of action between both institutions aims to (i) develop women's leadership in agriculture and climate research, to promote their access to decision making positions in regional, and national research, extension, and advisory organizations to inclusive climate smart agriculture, (ii) promote women's entry and advancement in agriculture and climate research, with strategies to support women's positive career experience and progression in AICCRA implementing countries and (iii) facilitate knowledge exchange and sharing on women's experience and challenges as scientists in agriculture and climate science, and the needed actions to support them in the workplace.

This infonote aims at documenting and discussing the capacity building for women leadership in agricultural and climate research provided by Alliance Bioversity International and CIAT (AICCRA) and CORAF to empower African women scientists for impacts and better representation at all levels.

PARTNERSHIPS FOR BOOSTING WOMEN LEADERSHIP IN SCIENCE

Collaboration and partnership between workers from different institutions can foster and encourage women in taking responsibilities at various decisional positions. Studies on gender and research have shown that the lack of supports to women within workplace institutions, has a strong negative effect on women's ability to obtain higher-level positions (Acker 1990; Roth 2006).



The representation of women in agricultural research and development, and the expected impacts can be achieved through collaboration and capacity building. National, sub-regional and international organizations can work together to strengthen women's leadership in science. CORAF as an umbrella organization of national agricultural research systems (NARS) in West Central Africa has a network of scientists in agricultural research and development and extension workers. Linking women members of this network to other women leaders in the continent is an important step in ensuring this leadership. Women most of time lack mentors in their institutions led often by men. Institutional support such mentorship and positive interpersonal relationships might boost women leadership in science. Also, leveraging existing coordination mechanisms and collaboration to systematize gender integration led to the cultivation of high-level champions who may influence political will and establish accountability for high-level commitments to gender equality (Elwell et al., 2023). Thus, through the sub-regional component of AICCRA in West and Central Africa which is implemented through the creation of multi-stakeholder partnerships (of existing scientific and educational networks and centers), Alliance Bioversity international and CIAT supports CORAF to leverage on its partnership across Africa with Research Institutes (ILRI, IITA, ICRISAT, AfricaRice, ISRA, and WASCAL), universities (RUFORUM), and regional coordination structure for climate-hydrology (AGHRYMET) to capacitate women of its network on Leadership in Agriculture and Climate Research. It is a long-awaited need for collaboration that has materialized in the context of this training, to go beyond the individual impact of each institution. Organizing such in person training helps to identify the strengths and weaknesses of women researchers and equip them for enlightened and effective leadership. This will help to know bias literacy, to reduce gender biases, and finally to break ingrained habits of stereotyping on women capacity to lead science.

BENEFICIARIES

The training brought together 27 participants including a man from 15 African countries including non AICCRA countries (Benin, Burkina Faso, Cameroun, Eswatini, Ivory Coast, Malawi, Niger, Nigeria, and South Africa), AICCRA countries (Ethiopia, Ghana, Kenya, Mali, Senegal, and Zambia) and United States of America. Participants came from 18 institutions around Africa including CG centers (ABC, AfricaRice, ICRISAT, IITA, and IWMI), NARS (ARCN, INRAB, and ISRA), universities (IRI, HU, UDS, UG, UFHB, UAM), public agency (ANCAR and ANACIM), civil society (CAMYIRD) and regional organizations (CORAF and WASCAL) (Table 1).



Figure 1: Training team and participants at the end of the training

Table 1: Institutions attending the workshop per country

| Country (number of institution) | Institution | Acronym |
|---------------------------------|--|-------------|
| Benin (1) | National Agricultural Research Institute of Benin | INRAB |
| Burkina Faso (1) | West African Science Service Centre on Climate Change and Adapted Land Use | WASCAL |
| Cameroun (1) | Cameroon Youth Initiative for Rural Development | CAMYIRD |
| Eswatini (1) | International Water Management Institute | IWMI |
| Ghana (4) | International Institute of Tropical Agriculture | IITA |
| | International Water Management Institute | IWMI |
| | University for Development Studies | UDS |
| | University of Ghana | UG |
| Ivory Coast (1) | Université Félix Houphouët-Boigny | UFHB |
| Kenya (2) | Alliance Bioversity International and CIAT | ABC |
| | International Crops Research Institute for the Semi-Arid Tropics | ICRISAT |
| Malawi (1) | Alliance Bioversity International and CIAT | ABC |
| Mali (1) | Africa Rice Center | AfricaRice |
| Niger (1) | Abdou Moumini University | UAM |
| Nigeria (1) | Agricultural Research Council of Nigeria | ARCN |
| Senegal (5) | National Agency for Civil Aviation and Meteorology | ANACIM |
| | National Agricultural and Rural Advisory Agency | ANCAR |
| | Agricultural Research Institute of Senegal/ Regional study Centre for improving Crop adaptation to drought | ISRA-CERAAS |
| | West and Central Africa Council for Agricultural Research and Development | CORAF |
| | Alliance Bioversity International and CIAT | ABC |
| South Africa (1) | International Water Management Institute | IWMI |



| | | |
|------------------------------|--|------|
| Uganda (1) | Alliance Bioversity International and CIAT | ABC |
| United States of America (1) | International Research Institute for Climate and Society | IRI |
| Zambia (1) | International Institute of Tropical Agriculture | IITA |

KEY SKILLS ACQUIRED

Women scientists in agricultural research and development to accomplish their roles better and greatly were capacitated in the understanding of leadership and needed skills for a good leader. Thirteen (13) themes were spread under six (6) modules and six (6) group exercises over the 5-day period (Figure 2).

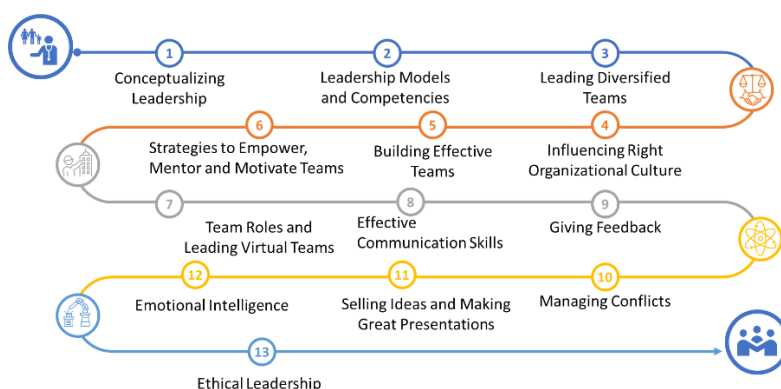


Figure 2: Themes developed during the training

The training provides participants with (i) skills on leadership, team building, conflicts management, and working with diversity developed, (ii) knowledge on how to make a more memorable impact through their leadership style within their organization, (iii) communication skills and storytelling ability with an audience and (iv) knowledge on how to use the emotional intelligence and how leaders identified and respond to situations that challenge assertiveness.

The themes developed have not only changed these women's vision of leadership but have also enabled them to enhance their strength as women and their skills in the workplace. They are becoming game changers who will inject new momentum into their workplaces and teams, which will impact on their contribution to climate change research outcomes.

Learning outcomes of the event

The participants found that the training has increased their knowledge and skills (Figure 3). Overall, participants found that emotional intelligence (41%), selling ideas and creating great presentations (15%), managing conflict (15%), and leadership skills and modules (11%) themes were most useful (Figure 4).



"We are very grateful to AICCRA and CORAF for the women's leadership training. I can testify that I am a new person after this training. I ask myself why now? It's a course I should have taken ten years ago", **Dr Gnanki Nathalie KPERA**, from Benin.



"A leader is someone who influences and transforms. The course has enriched me both personally and professionally. The skills I have acquired will enable me to manage my teams and achieve consensual results. I now feel ready and equipped to have an impact on my environment", **Mrs Alice Norra W. THEGUE**, from Cameroon.

*I participated to the training, and it was a very good training. The training aims to empower women leaders to overcome all the challenges they may face as women and leader in the achievement of different duties in different domains of activity. That was very great in identifying a lot of our faults and a lot of our weakness but also we have to enhance, how to build on the strength we already have as women. **Dr Marie Nicole Taha NKOUM** from Senegal*

*The training has been informative and we have learned how to be a good leader; how to interact with our team and what we need to do to be effectively a good leader because as a leader, we have to have impact on our team members, we have to understand and know what are their skills and how to catalyze those skills so that they can be able to perform. So, I appreciate CORAF and AICCRA for bringing us here and I hope that with the knowledge we have gained, we can apply it to being a good leader. **Mrs Ngowenani Nohayi Peggy** from South Africa.*

*We're going through everything that's ethical: ethical for a leader by combining emotional intelligence in conflict management, in the management of work teams that we have in the performance of our duties. If this training had been given a little earlier to people at the start of our careers, we would have become accomplished leaders. **Dr Johnson Felicia** from Ivory Coast.*



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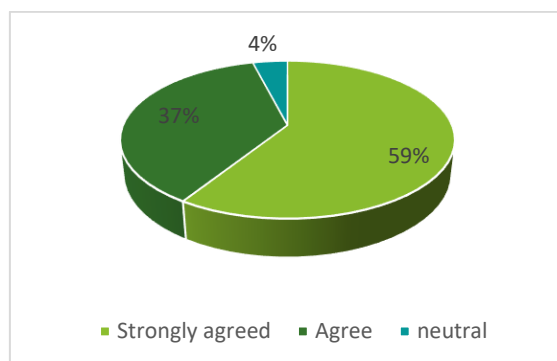


Figure 3: Participants' perception on the add value about Knowledge and Skills



Figure 4: Most useful topics for participants

NEXT STEPS

Through the third priority intervention domain of its Strategic Plan 2018-2027, CORAF aims to ensure equitable access to agricultural research and development resources, and opportunities and benefits for men and women, particularly for vulnerable groups in West and Central Africa (WCA). CORAF's strategy for mainstreaming gender issues into agricultural development programs involves women and youth capacitating to make significant interventions and contributions to agricultural development. CORAF is counting on collaboration to achieve this objective. CORAF and Alliance Bioversity International and CIAT through the framework of AICCRA (Accelerating Impacts of CGIAR Climate Research for Africa) project collaborate by bringing together researchers and policy makers to revitalize genuine mutual engagement to address the challenges of climate change.



CORAF intends to take advantage of this collaboration to equip its network of researchers and women leaders with capacity building in various fields, including the development of women leadership in NARS next years.

Leveraging on the acquired competencies, women in agricultural sciences planned to train the gender focal point of FSRP countries, other gender representatives in country level and General Director of WASCAL, CCARDESA, AFAAS. Together with East and North Africa partner organizations, CORAF will draft a project on youth and gender inclusion in Agriculture sector. Online meeting will be scheduled regularly to follow up how the participants integrate the training outcomes in their daily activities.

CONCLUSIONS AND LESSONS LEARNED

Despite the existence of several gender strategies and policies, gender issues such as their representation at all levels in institutions still a challenge. Women are underrepresented in agricultural research and climate change.

However, building women's capacity increases their knowledge, skills, and strength, which will enable them to assert their leadership and influence policies. Women researchers from 15 African countries and 18 institutions across Africa, brought together by CORAF and Alliance Bioversity International and CIAT, acquired competencies which has radically changed their view of the notion of leadership. The training will impact their career development and empowerment in the workplace and in agricultural research and development in Africa. Emotional intelligence, selling ideas and making great presentations, managing conflict, and leadership skills are themes that added to their knowledge and expertise as leaders. From this experience, lessons learned are :

- Institutional collaboration remains one of the pillars for building women's leadership on the African continent ;
- Providing such training to women at the beginning of their careers would increase the number of accomplished and informed women leaders and their impacts on climate research;
- Bringing together women in agricultural research and climate change allows them to share their experiences in workplace as well as their experiences in adapting to and mitigating climate change effects;

FURTHER READINGS

Acker, J. 1990. 'Hierarchies, Jobs, Bodies: A Theory of Gendered Organizations.' *Gender & Society* 4: 139-58

Agarwal B (2018) Gender equality, food security and the sustainable development goals. *Curr Opin Environ Sustain* 34:26-32

Cheryan S., Ziegler S. A., Montoya A., Jiang L. (2017). Why are some STEM fields more gender



balanced than others? *Psychological Bulletin*, 143, 1–35.

Diekman, A. B., & Benson-Greenwald, T. M. (2018). Fixing STEM workforce and teacher shortages: How goal congruity can inform individuals and institutions. *Policy Insights From the Behavioral and Brain Sciences*, 5(1), 11–18. <https://doi.org/10.1177/2372732217747889>

Elwell, N., Rajat Shrestha, A. Martinez, A. Trivedi, and H. Ding. 2023. “Why gender-responsive agricultural adaptation is underfunded.” Working Paper. Washington, DC: World Resources Institute. Available online at doi.org/10.46830/wriwp.21.00165.

Hill C., Corbett C., Andresse, St. R., (2010). *Why So Few? Women in Science, Technology, Engineering, and Mathematics*. Washington, DC 20036, 108 p.

Miller D. I., Eagly A. H., Linn, M. C. (2014). Women's Representation in Science Predicts National Gender-Science Stereotypes: Evidence From 66 Nations. *Japanese Journal of Educational Psychology* DOI: 10.1037/edu0000005

Miller, D. I., Eagly, A. H., Linn, M. C. (2015). Women's representation in science predicts national gender-science stereotypes: Evidence from 66 nations. *Journal of Educational Psychology*, 107(3), 631–644

Moss-Racusin C. A., Dovidio J. F., Brescoll V. L., Graham M. J., Handelsman J. (2012). Science faculty's subtle gender biases favor male students. *Proceedings of the National Academy of Sciences of the United States of America*, 109(41), 16474–16479.

Nosek, B. A., Smyth, F. L., Sriram, N., Lindner, N. M., Devos, T., Ayala, A., Greenwald, A. G. (2009). National differences in gender–science stereotypes predict national sex differences in science and math achievement. *Proceedings of the National Academies of Science*, 106, 10593–10597. [doi:10.1073/pnas.0809921106](https://doi.org/10.1073/pnas.0809921106)

Resurrección B.P., Goodrich C.G., Song Y., Bastola A., Prakash A, Joshi D., Shah S.A. (2019) In the shadows of the Himalayan mountains: persistent gender and social exclusion in development. In: Wester P et al. (eds.) *The Hindu Kush Himalaya assessment*. Springer, Cham, pp. 491–516

Roth, L. 2006. *Selling Women Short*. Princeton: Princeton University Press.

Roy J., Anjal Prakash, Some S., Singh C., Kerr R. B., Caretta, M.A., Conde C, Ferre M. R., Schuster-Wallace C., Tirado-von der Pahlen M. C., Totin E., Vij S., Baker E., Dean G., Emily Hillenbrand, Alison Irvine, Farjana Islam, Katriona McGlade, Nyantakyi-Frimpong H., Ravera F., Segnon A., Solomon D. and Tandon I. (2022). Synergies and trade-offs between climate change adaptation options and gender equality: a review of the global literature. <https://doi.org/10.1057/s41599-022-01266-6>



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About AICCRA Info Notes

Titles in this series aim to disseminate interim research on the scaling of climate services and climate-smart agriculture in Africa, in order to stimulate feedback from the scientific community.

Photos

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Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA) is a project that helps deliver a climate-smart African future driven by science and innovation in agriculture. It is led by the Alliance of Bioversity International and CIAT and supported by a grant from the International Development Association (IDA) of the World Bank. Explore our work at aiccra.cgiar.org