



Curriculum Platform Needs Assessment for AICCRA Partners Curriculum Platform Needs Assessment for AICCRA Partners

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**Accelerating Impacts of CGIAR Climate Research for Africa
(AICCRA)**

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About AICCRA

Accelerating Impacts of CGIAR Climate Research in 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 AICCRA's work at aicra.cgiar.org

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About the Authors

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Introduction

This report summarizes findings on needs and gaps for a key activity of the AICCRA project - development of a curriculum platform. The AICCRA curriculum platform will be a resource that enables institutions to establish and continually develop curricula that support key competencies/skills in climate services/CSA prioritized by stakeholders in regions.

The AICCRA curriculum platform activity is being led by RUFORUM. However, as part of the AICCRA project, the climate services cluster, together with AICCRA CSA and regional program collaborators, is supporting some activities related to the platform, including a survey to assess curriculum needs and gaps as identified by AICCRA clusters and partners.

Prior to implementing the survey, initial engagement between the AICCRA team and RUFORUM in early 2022 on the curriculum platform activity resulted in some key decisions.

First, the learning management system (LMS) for the platform was selected. The curriculum platform will be implemented using RUFORUM's existing Moodle learning platform. This platform was selected because it fits the priority needs for the project and because it will leverage RUFORUM's existing LMS technology infrastructure and capacity for management and use within the RUFORUM network.

Second, based on initial scoping of curriculum topics and LMS format it was decided the curriculum would be developed in a modular format. This will provide maximum flexibility for adapting curriculum to different topics and format needs.

Third, interest was confirmed in developing curriculum for use both directly by university students and to be shared directly with instructors and facilitators for integration of content into their existing courses. Instructor focused content could also be easily implemented for training of trainers (TOT) to expand instructor capacity in the content and platform.

Continued coordination of the curriculum platform with other education and capacity building activities under AICCRA will be important to maximize the usefulness and impact of the curriculum platform going forward.

This needs assessment for RUFORUM partners complements a needs assessment survey conducted by RUFORUM on curriculum topic priorities within the RUFORUM network.

Survey Respondents

This survey targeted AICCRA partners beyond the RUFORUM network. The survey was shared with 53 individuals and received 18 responses. Respondents represented CIAT/AICCRA (GSI Cluster Lead), ILRI/AICCRA (Cluster Lead Ethiopia and EA), CIAT/AICCRA (Cluster Lead, Senegal), CIAT/AICCRA (Cluster lead, WA) ICPAC, ANACIM - National Agency of

Civil Aviation and Meteorology (Senegal). CSIR - Crops Research Institute, CAB (Ghana), University for Development Studies (Ghana), Zambia Meteorological Service, Syngenta Foundation for Sustainable Agriculture (Mali), Injibara University (Ethiopia), MoANR - Ministry of Agriculture and Natural Resources (Ethiopia), NMA - National Meteorology Agency (Ethiopia), ASARECA - Association for Strengthening Agricultural Research in Eastern and Central Africa, RAINS - Regional Advisory Information Network Services, and WASCAL/CEA-CCBAD - Université Félix Houphouët-Boigny.

Survey Overview

The survey was organized into sections on the curriculum topics, learners, and learning environment, with gender and inclusion considerations included in all sections. The full survey form is included as an annex and was also shared as a separate reporting deliverable in June 2022.

Part 1: Curriculum Topics

The general range of topics to be included in the curriculum platform align with the scope of AICCRA activities on Policy (Theme 1), Climate Smart Agriculture (Theme 2), Gender (Theme 3), and Climate Information Services (Theme 4). Respondents were asked to provide curriculum topic priorities in their own words, and then also select priorities from a list of topics suggested by Theme Leads.

A wide range of topics were suggested by respondents in their own words, across all four themes. Additional topics beyond the scope of the 4 themes were also mentioned such as One Health climate services and sustainable financing of climate products. When prioritizing topics provided by theme leads, CIS topics were generally prioritized by the highest number of respondents. Within policy topics provided, the top priority is decision support tools for mitigation and adaptation in agriculture. Within CSA topics provided, the top priorities are bundling of CIS and CSA practices, and innovative CSA delivery channels. Gender topics are also considered a medium to essential priority by all respondents. Five respondents considered all topics to be relevant continent-wide, while a wide variety of specific topics were provided by the remaining participants in answer to this question.

A wide range of organizations may benefit from access to the curriculum platform based on respondents. Respondents suggested expanded university access, including local/national universities working on climate and agriculture, agricultural technical and vocational colleges, and universities across West Africa and across the WASCAL Network. Other general types of organizations mentioned included government extension offices, food security and livelihood NGOs, farmers organizations, and health and water groups. Specific organizations mentioned included Musika, WFP, Consortium for agriculture forum, Zambeef, AGNES, KNUST, AfricCLP, AGRINATURRA, EDRMC, EM, and WOSAG.

Specific content developed by respondent organizations suggested for inclusion in the platform includes:

- The basis of seasonal forecast, introduction to climate change
- Pest Risk Analysis (PRA) and Horizon Scanning Tools as decision support tools for adaptation and mitigation actions in agriculture and
- Content from a Sustainable Intensification of Mixed Farming Systems (SI-MFS) hosted virtual institute on systems science. More information [here](#).

Eleven respondents indicated gender and inclusion considerations should be taken into account in development of the content. Specific gender considerations noted included:

- Gender and the use of climate information
- Gender and language considers, especially local dialects
- Gender and youth specific impacts of climate change
- Development of gender-responsive CSA technologies and innovations
- They key role of women in education and income generation, and family resilience to climate change
- Gender as part of the understanding of the farming system and behavioral sciences.
- Gender considerations should be integrated into extension courses specifically.

Table 1 below provides the topics of importance as suggested by respondents in their own words. Topics highlighted as priorities are included in bold, with most popular topics at the top of each box.

Table 1. Topic priorities suggested by respondents.

AICCRA Themes	Important Topics Shared by Respondents (Top Priorities in Bold)
Theme 1: Policy	<ul style="list-style-type: none"> • Climate services policy • Use of climate information services in agricultural policy making and decision making • Coherence of CSA policies at national, regional and continental levels • Climate users and policy makers engagement to develop climate services/decision support tools • Developing policy briefs/statements, mainstreaming practices into development plans of state agencies.
Theme 2: Climate Smart Agriculture	<ul style="list-style-type: none"> • Climate Smart Agriculture • Approaches and tools for CIS and CSA development, scaling, and bundling • Site and land preparation, planting and planting materials, cultural practices, harvesting and storage • Understanding of agricultural systems, i.e. farming systems, response to risk, enabling environments. • Crop modeling, use of GIS and satellite imagery for crop

	<ul style="list-style-type: none"> ● Climate Smart Integrated Pest Management (CS-IPM) ● Alternative livelihoods options
Theme 3: Gender	<ul style="list-style-type: none"> ● Gender and Social Inclusion ● Benefits to women and youth of CIS, e.g., content promoting empowerment and priorities of women and youth ● Gender use, access and benefits of CIS ● Making CSA gender responsive ● Climate change impacts on gender roles
Theme 4: Climate Information Services	<ul style="list-style-type: none"> ● Climate Information Services ● Climate Basics, including climate science on weather and climate modeling, improving forecast accuracy, and data observation, including hydrological and environmental modeling ● Climate Risk Analysis and Management ● Theory and practices of co-production ● Translating key climate terminologies into local language ● Existing indigenous climate adaptation and practices, sectors susceptible to climate change ● Computational programming for weather and climate analysis and forecasting
Other	<ul style="list-style-type: none"> ● One Health Climate Services ● Sustainable Financing of Climate Smart Products ● Private sector engagement in the business around CSA and CIS ● Interface climate innovation (practice) ● Mitigation/Adaptation ● Artificial intelligence, climate leadership, climate entrepreneurship ● Ethics in communicating climate change change information ● Integrating rainfall harvesting in climate risk management ● Youth and climate ● Nature based solution, quality assurance, situation analysis ● Conservation practices, ethics in communicating climate change change information ● Building community coalitions and movements ● Econometrics, ag-economics, more on socio-economics, especially household and value chains ● Applying climate information to agricultural business

The 4 charts below provide respondent rankings on topics organized by theme, based on topics suggested by leads of each theme.

Chart 1. Policy Topic Priorities

Policy Topic Priorities

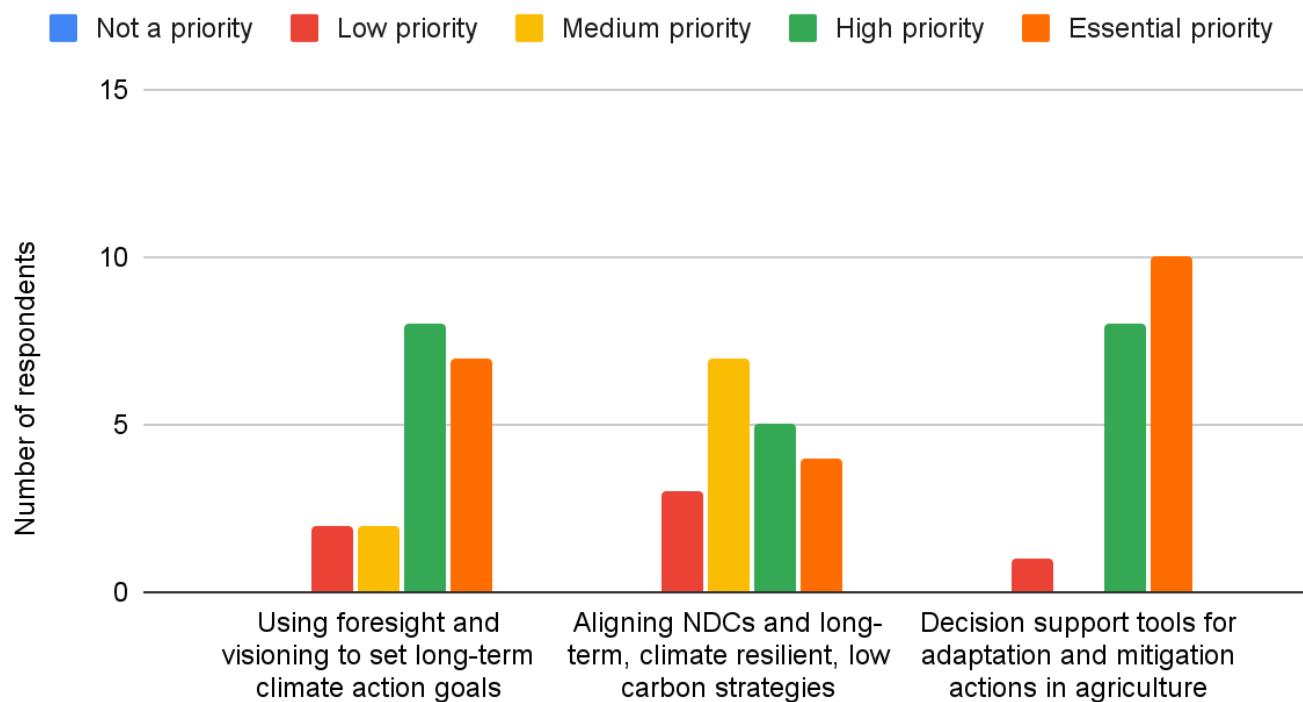


Chart 2. CSA Topic Priorities



CSA Topic Priorities

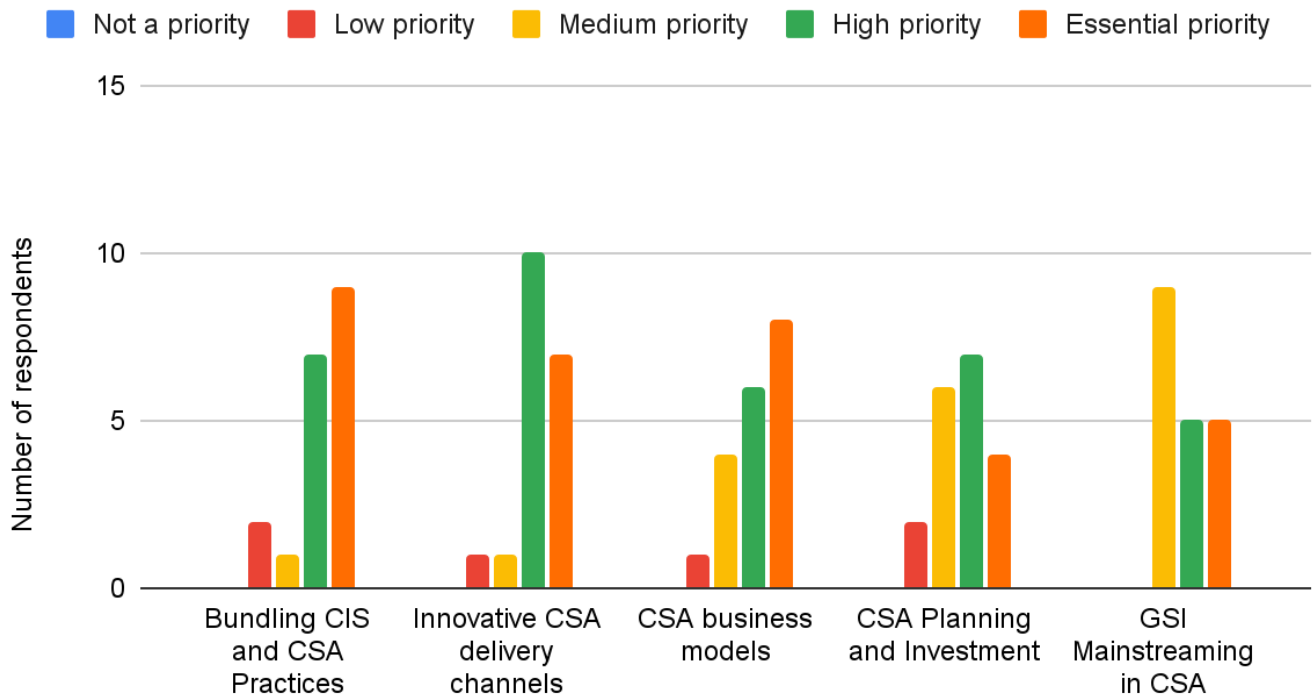


Chart 3. Priority of Gender Topics

Priority of Gender Topics

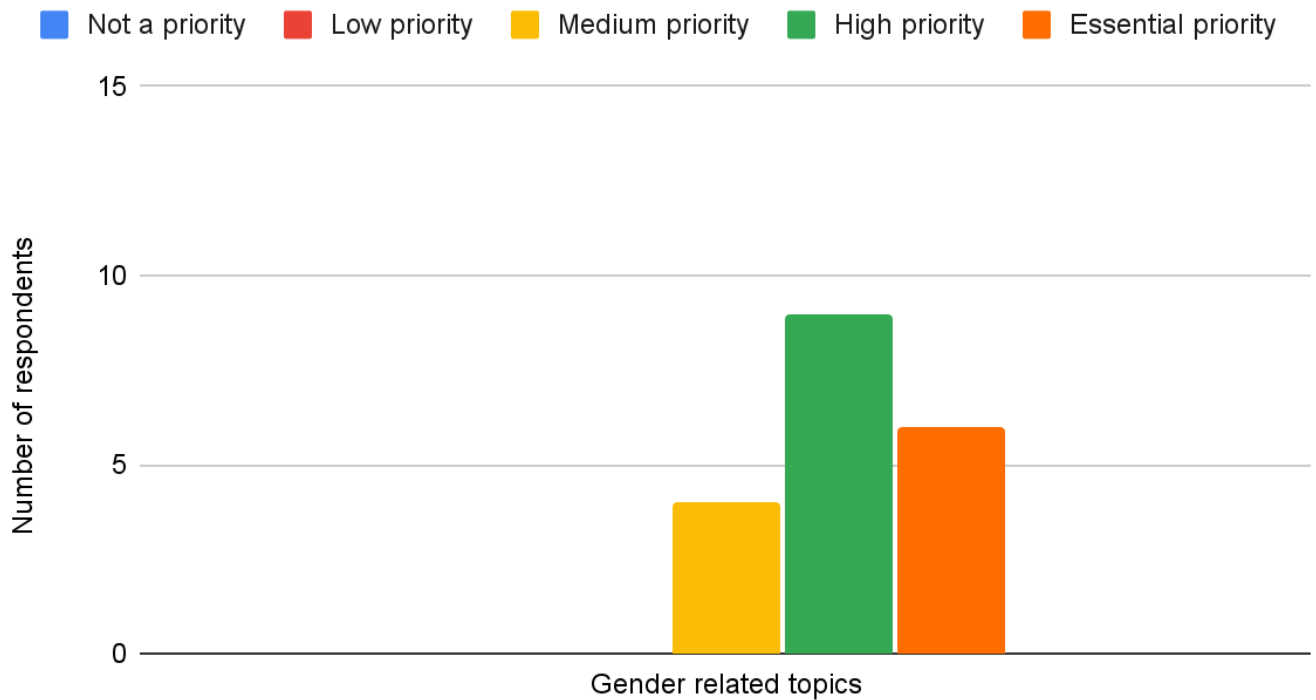
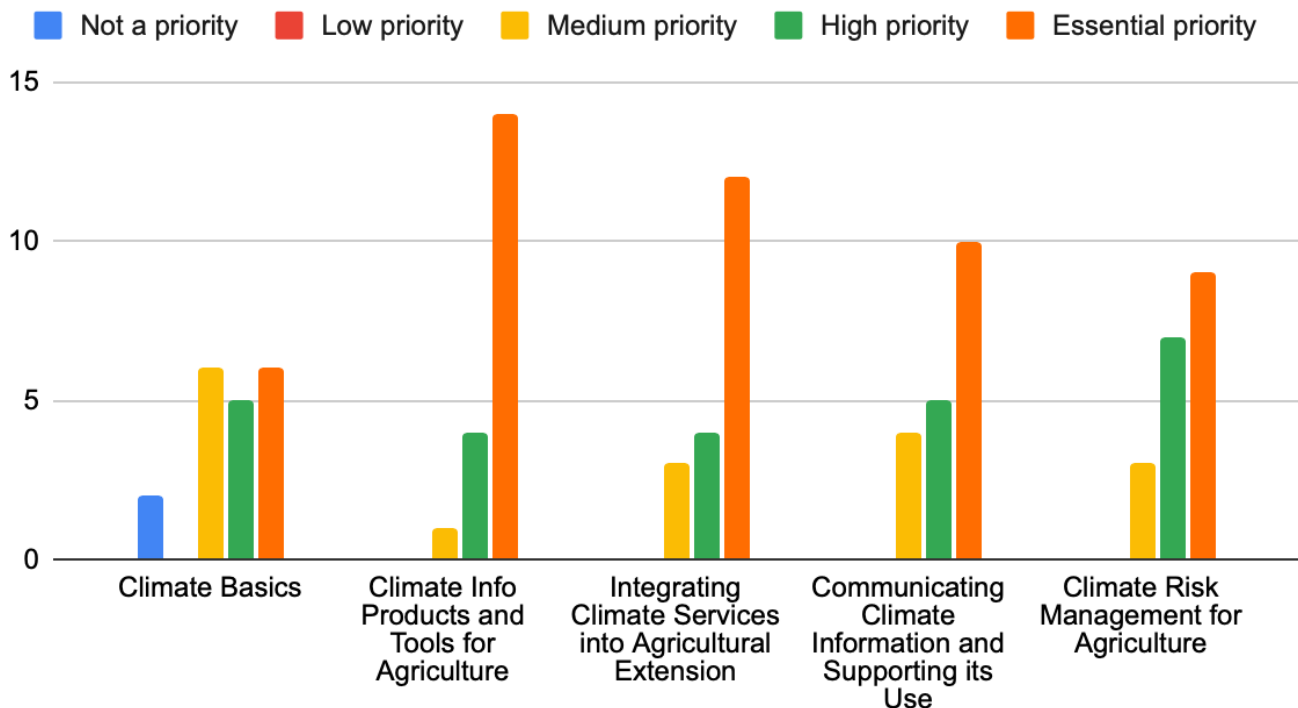


Chart 4. CIS Topic Priorities



CIS Topic Priorities



Part 2: Learners

The curriculum topics are perceived as highly beneficial to all target learner groups included, including agriculture extension (94%), RUFORUM universities (89%), NGOs (79%) and professional development (72%). Other target learners groups identified included sectoral governmental organizations, farmer organizations, media (including translation of information into local languages) and universities outside the RUFORUM network, including WASCAL universities.

Three-quarters of respondents indicated they interact with RUFORUM universities. Some do so through direct student engagement via internships, advising, supervising their field data collection, collaborating on joint projects, and hosting students at MSc and PhD level (IRLI). Others respondents indicated they are working at the institutional level with the RUFORUM universities on capacity building, including integration of climate knowledge into agriculture curriculums, and content development and training, or are planning to join the RUFORUM network soon. A quarter of respondents indicated their organization does not engage with RUFORUM universities directly.

The potential curriculum platform target learners from the respondent's own organization can be grouped into the following general categories based on their background, education and general areas of work.

1. Meteorology/climatology
 - Generation of weather and climate information
 - Work with weather and climate observations
 - Master's level climate scientists, forecasters
2. Agriculture
 - Agriculture Extension Agents
 - Agriculture Project Program Officers
 - Agriculture related academic streams
 - Experts who working in crop development, animal husbandry, feed, food security and students who will graduate with the same fields
 - Any one with a least secondary level education working in agriculture and environment.
3. General Academic
 - General academic tracks at undergraduate, master's PhD students, and researcher levels
 - Interns, MSc and PhD students in a wide range of topics including climate risk management
 - Those with a general background in Biology, Environment, Geography, Agricultural Engineering
4. Other professional development / community focused
 - Professionals and NGOs
 - Community and smallholder farmers: beneficiaries of our climate focused work. Mostly illiterate.
 - Women and Youth: beneficiaries affected by climate change. Mostly illiterate.
 - Staff and employees, Diploma as minimum level of education

The overall potential impacts of this curriculum for the respondent's target learners and organization included: improving generation, delivery and use of climate services, including roles and responsibilities, decision making, and taking action, and improved implementation of activities. It was also noted that improved general awareness and understanding of these topics will inform further use and activities.

Specific impacts noted included:

- anticipating dangers, mobilizing resources,
- developing relevant and impactful interventions
- improved productivity, problem analysis, income
- partnership formation, more engagement and trust
- increased relevance in member countries through meeting CSA information and technology needs
- enhanced teaching and research capacity, including climate change topics

Half of respondents indicated gender and inclusion considerations are important, including the following explanations:

- Gender and social inclusion should cut across all interventions because of the existing differences in gender roles and social strata.

- All expert or graduate should have a knowledge of gender may be as a course or seminar
- In some countries, the public extension community is an important target who should be prioritized for support and resourced for operations. Also encouragement of more balanced representation of females in the extension agencies is badly needed.
- Gender and inclusion related needs are not exactly the same. The understanding of the situations depends on the origin of the learners, their religion etc.
- Timing and length of sessions as it related to the roles of women as well as delivery language

Part 3: Learning environment

The learning environment option of highest interest to respondents is short courses or other formal professional development opportunities (83%), with high interest also in informal or ad hoc capacity building (67%) and integration into academic courses (61%). Other options suggested included graduate study programs, practical hands-on internships, short online videos, and results oriented continuous short term training programs.

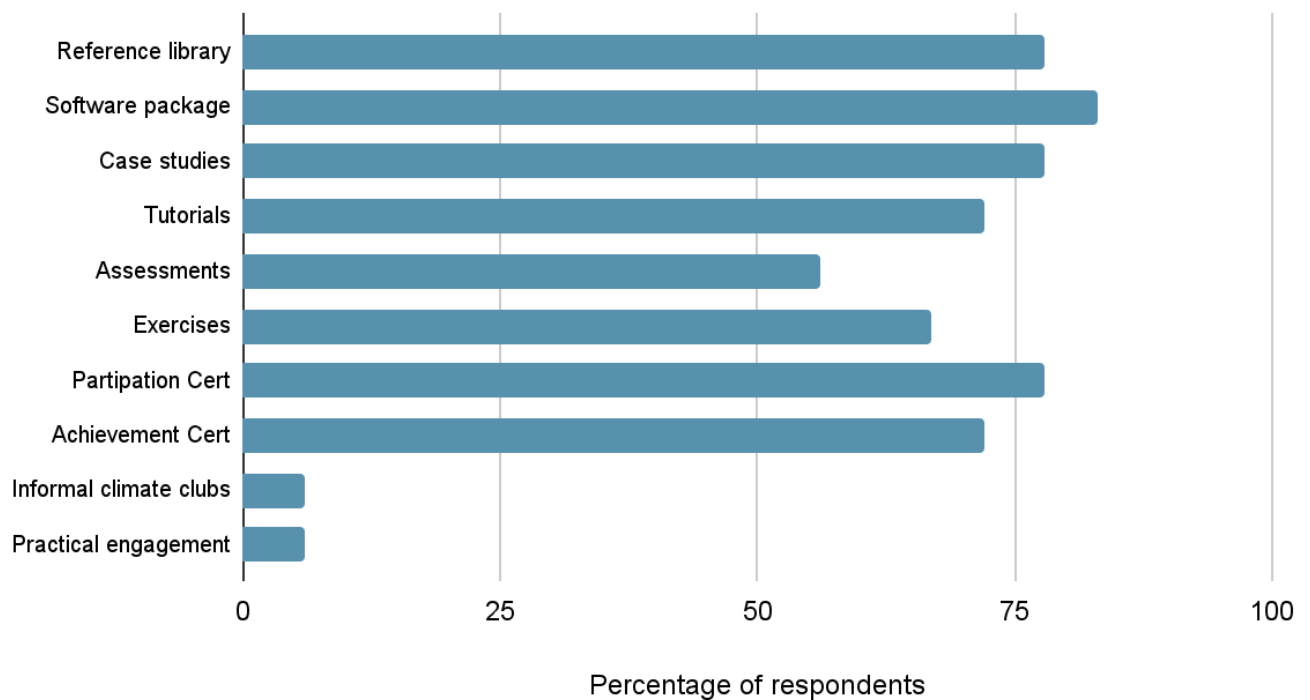
There is high interest in both instructor use of the platform content to develop and implement their own training (82%) and direct learning engagement with the online content (76%). Those who selected instructor use of the platform are interested in both content for instructors to build their own capacity in the training of trainings (TOT) model (76%) and content that can be directly implemented by instructors (eg. presentation materials) (65%). One respondent also suggested that instructors could translate content into local languages for multimedia use.

In addition to modular content on the topics above respondents indicated which additional platform features they considered important to also include in the chart below.

Chart 5. Importance of additional platform features



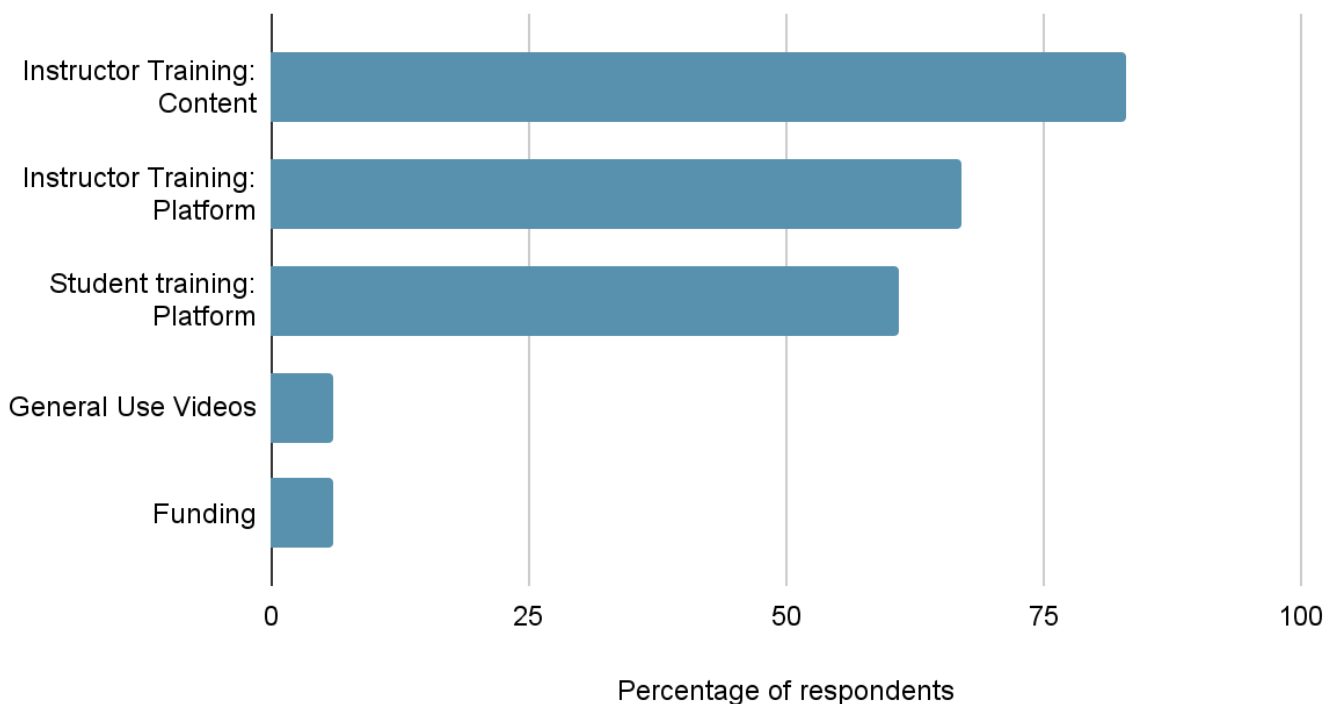
Additional platform features of importance



Respondents then indicated which capacities and resources would be needed by their organizations to use the curriculum developed on this platform, as described in the following graph.

Chart 6. Capacities and resources needed for platform use

Capacities/resources needed to use platform



Learning platform specific gender and inclusion considerations noted by five respondents included: increased capacity for communication, additional time for homework, seminars, time of day to engage, disaggregated learning groups, and literacy levels.

Summary

This report summarizes the needs of AICCRA partners for the curriculum platform activity. Although RUFORUM is the highest priority target group for this platform, this needs assessment will be used to maximize immediate usefulness of this platform for other AICCRA partners, as well as scope scaling and expansion of the platform and its impact going forward.

The results indicate CIS content is highest priority but there is a broad range of priorities noted across all four themes and beyond. The curriculum platform content is considered useful for a wide range of potential target learners, including those in agriculture extension, RUFORUM universities, NGOs, and other types of professional development. Respondents also envision the platform being useful across a range of learning environments, including short courses or other formal professional development opportunities, informal or ad hoc capacity building, and integration into academic courses. There is high interest in both instructor use of the platform content to develop and implement their own training and direct learning engagement with the online content. Instructor use of the platform could include both content for instructors to build their own capacity in the training of trainings (TOT) model and content that can be directly implemented by instructors (eg. presentation materials). Respondents provided a range of useful insights for integration of gender and inclusion considerations in the development of the curriculum platform, across content topics, target learners and learning environment.

Annex A: Survey form

This survey form was also provided as a separate reporting document in June 2022.

Curriculum Platform Survey for AICCRA Partners

Section 1

Email*

Name*

Title*

Organization*

Email Address*

Relationship with AICCRA or RUFORUM, e.g. member university, student, grantee, project partner, other*

Section 2

Curriculum topics

From the perspective of your organization and its goals, what are the most important curriculum topics needed for RUFORUM universities or others providing training or education, within the scope of AICCRA's activities on Policy, Climate Smart Agriculture, Climate Information Services, and Gender?

Out of all needs you've identified above, what are the top priorities?

Here are some examples of topics that may be included in the curriculum platform, please indicate which are important to you and your organization, on a scale of 1 (not a priority) to 5 (essential priority)

1 - Not a priority

2 - Low priority

3 - Medium priority

4 - High priority

5 - Essential priority

Policy: Using foresight and visioning to set long-term climate action goals

Policy: Aligning NDCs and long-term, climate resilient, low carbon strategies

Policy: Decision support tools for adaptation and mitigation actions in agriculture

CSA: Bundling CIS and CSA Practices

CSA: Innovative CSA delivery channels

CSA: CSA business models

CSA: CSA Planning and Investment

CSA: GSI Mainstreaming in CSA

CIS: Climate Basics

CIS: Climate Information Products and Tools Available for Agriculture

CIS: Integrating Climate Services into Agricultural Extension

CIS: Communicating Climate Information and Supporting its Use

CIS: Climate Risk Management for Agriculture

Gender related topics

Are there other priority topics not already included above? If so please list them here.

Which topics selected above would be continent wide?

Are there other organizations that would benefit from access to this curriculum platform? If so please list organizations and contact points for potential follow up.

Has your organization developed content you would like to suggest for inclusion in the platform? If so please provide more information and contact information, if different from email above.

Are there curriculum topic-related gender and inclusion considerations we should take into account? If so, please explain.

Section 3

Learners

Which groups of target learners would most benefit from curriculum on topics described above? Check all that apply.

RUFORUM universities

Professional development

NGOs

Agriculture Extension

Other:

Does your organization engage graduates and others affiliated with RUFORUM universities in your work? If so, how?

For your own organization, please describe the target learners for the new curriculum topics as prioritized above. What is the background, education, and experience of these learners?

What roles and responsibilities do they currently have within your organization?

What is the overall impact this curriculum, as prioritized above, could have for your target learners and organization overall, eg. informing activities, decision-making etc?

Are there learner related gender and inclusion considerations we should take into account? If so, please explain.

Section 4

Learning environment

Which of the following learning environment options would be used by your organization to potentially integrate platform content into your capacity building activities?

Short courses or other formal professional development formats

Informal or ad hoc capacity building activities

Academic courses

Other:

Would your learners engage directly with online platform content or would you want your own instructors to implement these trainings?

Learners would engage directly with online content

Instructors would use platform content to develop and implement their own trainings

Other:

If you selected instructors above, would you prefer either:

Content developed for instructors to build their capacity (training of trainers model)

Content that can be directly implemented by instructors (eg. presentation materials)

Other:

In addition to modular content on topics above, what additional features and elements would be most important?

Reference library with relevant publications, etc

Access to software packages

Case studies

Tutorials

Assessments

Exercises

Certificate of Participation (assessment of learning optional)

Certificate of Achievement (assessment of learning required)

Other:

What capacities/resources would be needed at your organization to use the curriculum developed on this platform:

Training of instructors on content topics

Training on use of platform for instructors

Training on use of platform for students/learners

Other:

Are there learning environment related gender and inclusion considerations we should take into account? If so, please explain.

Section 5

Survey participants

Thank you for participating in our survey!

Optional: We would welcome you to review the full list of individuals being sent this survey here, and then answer below if there are any AICCRA partners we've missed that should also receive this survey.



AICCRA
Accelerating Impacts of CGIAR
Climate Research for Africa



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