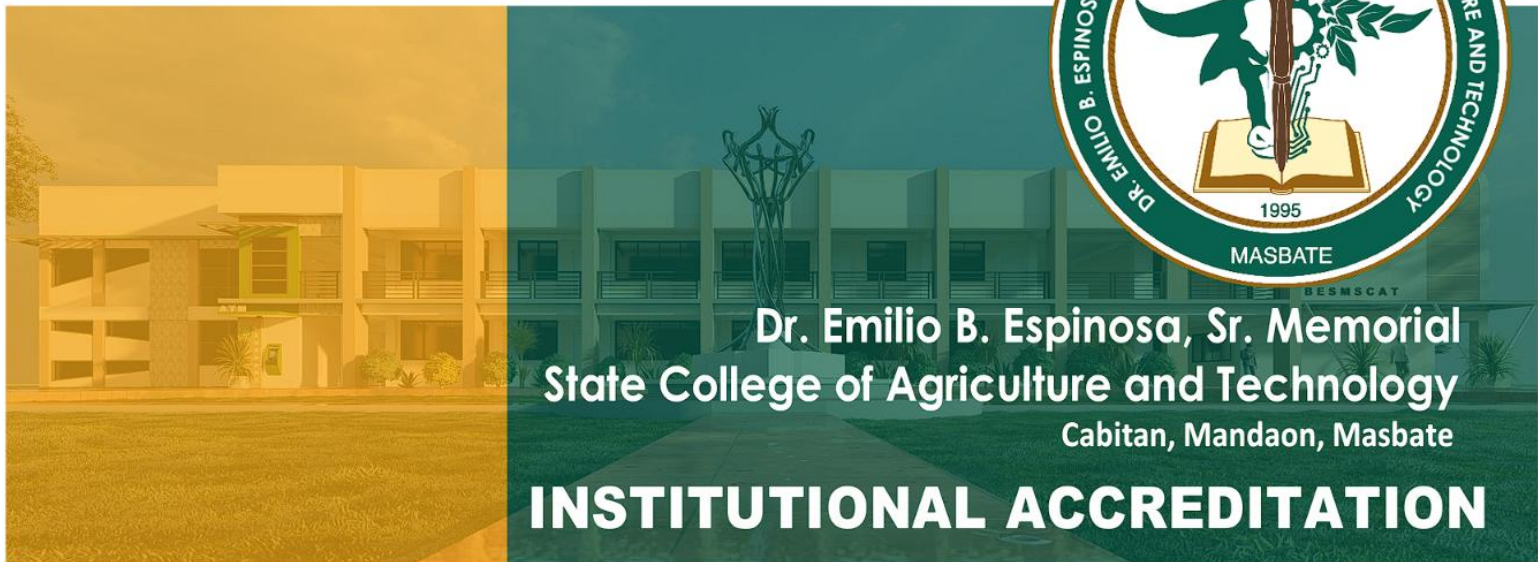




AREA IV RESEARCH

Area IV – Research highlights DEBESMSCAT’s commitment to strengthening its research ecosystem and becoming a knowledge-generating and innovation-driven institution. The College prioritizes research productivity and quality through institutional research programs, an updated Research Manual, support and incentives for researchers, increased publications, conference participation, and stronger research funding. It also promotes innovation through intellectual property protection, research and innovation centers, and the commercialization of research outputs into practical technologies, products, and services responsive to the needs of Masbate and the Bicol Region.



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PARAMETER A: RESEARCH STRATEGY AND CAPACITY

A.1 Research Strategy

A.1.1 Agenda/Program Congruence with Institution's Mission

Agenda/Program Congruence with Institution's Mission

The Research Agenda and Program of the Dr. Emilio B. Espinosa, Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT) are fundamentally anchored on the institution's mandate to generate knowledge, strengthen innovation, improve community conditions, and contribute to the socio-economic transformation of Masbate. The congruence between the Research Agenda and the institutional mission is not merely a matter of administrative compliance; rather, it reflects a strategic relationship in which research serves as a major mechanism for realizing DEBESMSCAT's aspirations for quality education, responsive extension, productive partnerships, institutional excellence, and community transformation. This alignment is particularly significant under the institution's 2026–2030 Strategic Development Plan, which provides the current direction for DEBESMSCAT's development and reinforces its commitment to instruction, research, extension, production, internationalization, and multi-sectoral collaboration.

DEBESMSCAT's current vision is to become, by 2050, "a premier university that is globally focused, nationally recognized, and committed to the transformation of Masbate." Its mission specifically emphasizes four major institutional commitments: (1) providing quality education, research, extension, and production through accessible, data-driven, and internationalized quality services; (2) producing academically and skills-prepared, values-oriented, and leadership-honed graduates who are lifelong learners and global market-ready; (3) establishing Centers of Development and Centers of Excellence for the institution's flagship programs; and (4) ensuring partnerships with multi-sectoral local, national, and international institutions for academic research, production, and community-based collaboration. These mission statements provide the principal framework for determining the relevance and strategic direction of DEBESMSCAT's Research Agenda and Program.

DEBESMSCAT Mission

b. Mission

To actualize its long-term vision, DEBESMSCAT shall:

- Provide quality education, research, extension and production with accessible, data-driven, and internationalized quality service;
- Produce academically and skills-prepared, values-oriented and leadership-honed graduates that are lifelong learners and global market-ready;
- Establish Centers of Development and Center of Excellence for all the flagship programs of the institution; and
- Ensure partnership with multi-sectoral local, national and international institutions for academic research, production and community-based collaboration.

Congruence with Quality Education and Data-Driven Institutional Development

The first and most direct area of congruence is the mission commitment to provide quality education, research, extension, and production through accessible, data-driven, and internationalized quality services. Research is essential to this commitment because evidence-based institutional development requires reliable information concerning learners, faculty, curricula, teaching and learning processes, organizational systems, community needs, and emerging societal challenges.

The DEBESMSCAT Research Agenda therefore provides a mechanism through which institutional decisions can be supported by systematic inquiry rather than assumptions or anecdotal evidence. Research priorities may address teaching effectiveness, curriculum relevance, student achievement, faculty development, educational leadership, digital transformation, quality assurance, institutional governance, research capability, community engagement, agricultural productivity, technological innovation, environmental sustainability, livelihood development, and other concerns relevant to the institution and its stakeholders.

This orientation is consistent with the principle that research should respond to relevant institutional and societal problems and should generate knowledge that can inform planning, policy, and program development. In the Philippine higher education sector, the importance of research-informed decision-making is likewise reflected in national research policy, including the harmonized research agenda jointly formulated by DOST, CHED, and other NGAs, which emphasizes generating new knowledge, addressing priority concerns, focusing research resources on relevant issues, and using research results to inform planning, policy, and program development.

For DEBESMSCAT, this means that research is not treated simply as an academic requirement or a means of producing publications. It is positioned as an institutional intelligence system that can identify problems, explain conditions, evaluate interventions, forecast emerging needs, and provide evidence for strategic decision-making. Consequently, the Research Agenda directly supports the mission's emphasis on accessible and data-driven quality service.

Congruence with Research, Innovation, and Knowledge Generation

The second major area of congruence is the explicit inclusion of research in the institution's mission. DEBESMSCAT recognizes research as one of the core functions through which a higher education institution fulfills its public mandate. The institutional structure itself reflects this orientation through the Office of the Vice President for Research, Development, Extension, Innovation, Creative Works, and Knowledge Management. During DEBESMSCAT's 2026 operational planning, research and extension thrusts were identified as major components of institutional planning, demonstrating that research is integrated into the broader institutional development process.

The Research Agenda operationalizes this commitment by establishing priority areas that guide faculty, students, research personnel, academic units, and external collaborators toward research that is relevant, strategic, innovative, and responsive. It provides direction for the development of research proposals, faculty research, student research, institutional studies, externally funded projects, interdisciplinary research, and community-based investigations.

Such an agenda is particularly important for DEBESMSCAT because of its distinctive geographical, economic, agricultural, technological, and socio-cultural context. As a higher education institution serving Masbate, its research must simultaneously respond to local development concerns and contribute to national and international knowledge systems. Research on agriculture, fisheries, livestock, natural resources, education, entrepreneurship, tourism, indigenous knowledge, community development, disaster resilience, environmental sustainability, technology, governance, and social development can generate knowledge that is both locally grounded and potentially transferable to comparable communities.

The agenda therefore strengthens DEBESMSCAT's role as a knowledge-generating institution rather than merely a knowledge-consuming institution. It creates opportunities for faculty and students to contribute original evidence, models, technologies, policies, and innovations that address actual problems confronting Masbate and other communities.

Congruence with the Transformation of Masbate

A particularly strong area of alignment is the institutional vision's explicit commitment to the transformation of Masbate. This gives the Research Agenda a distinctly place-based and development-oriented character. DEBESMSCAT is not expected to pursue research in isolation from the realities of its surrounding communities. Instead, its research priorities should help understand, address, and transform the conditions affecting the people, economy, environment, institutions, and communities of Masbate.

The transformation agenda can be operationalized through research that identifies local development problems and develops evidence-based interventions. For example, agricultural research may contribute to productivity, climate resilience, value-chain development, food security, and sustainable farming. Studies in education may strengthen teacher competencies, educational leadership, learner outcomes, curriculum implementation, and inclusive education. Research in business and entrepreneurship may contribute to microenterprise development, local economic growth, tourism, innovation, and employment. Environmental and technological research may support climate adaptation, disaster resilience, resource management, and appropriate technologies.

This orientation ensures that DEBESMSCAT's research function is connected to its geographic mandate. Research becomes an instrument of transformation because its ultimate value is measured not only by publications and citations but also by its capacity to influence policies, improve practices, develop technologies, strengthen communities, and enhance the quality of life of stakeholders.

Congruence with Graduate Development and Lifelong Learning

The second mission statement emphasizes the production of academically and skills-prepared, values-oriented, and leadership-honed graduates who are lifelong learners and global market-ready. The Research Agenda directly contributes to this objective by embedding research, inquiry, critical thinking, innovation, and evidence-based problem-solving into the educational experience.

Students who participate in research projects develop competencies that extend beyond disciplinary knowledge. They learn to identify problems, formulate research questions, review literature, collect and analyze evidence, interpret findings, communicate results, and formulate recommendations. These competencies are increasingly important in a labor market characterized by technological change, information abundance, interdisciplinary work, and complex organizational challenges.

Research engagement also develops leadership. Students who investigate authentic problems learn to make evidence-based decisions, collaborate with others, manage projects, communicate findings, and assume responsibility for outcomes. These are consistent with the institutional goal of producing leadership-honed graduates.

The Research Agenda can therefore support a research culture that begins with students and continues throughout their professional lives. Undergraduate and graduate research, capstone projects, thesis and dissertation studies, research internships, student research conferences, innovation competitions, and community-based research can all serve as mechanisms for developing lifelong inquiry and learning.

In this respect, research is not separate from instruction. It strengthens instruction by making learning more authentic, problem-centered, evidence-based, and connected to real-world conditions.

Congruence with Centers of Development and Centers of Excellence

The third mission statement calls for the establishment of Centers of Development and Centers of Excellence for DEBESMSCAT's flagship programs. This commitment has direct implications for the Research Agenda because centers of development and excellence require sustained research productivity, specialized expertise, innovation, partnerships, infrastructure, and knowledge dissemination.

A strategically designed Research Agenda can identify research clusters around institutional flagship programs and emerging areas of specialization. Rather than allowing research activities to remain fragmented among individual researchers, the agenda can encourage thematic concentration and interdisciplinary collaboration.

Research centers can become institutional platforms for producing high-quality research, attracting external funding, developing technologies, publishing scholarly outputs, organizing conferences, establishing partnerships, mentoring researchers, and translating research findings into extension and production activities.

This approach also strengthens DEBESMSCAT's prospects for national and international recognition. A Center of Development or Center of Excellence must demonstrate evidence of sustained academic productivity, relevance, innovation, and impact. A coherent Research Agenda provides the intellectual infrastructure for achieving these outcomes.

The Research Agenda therefore contributes to institutional differentiation. It enables DEBESMSCAT to identify areas where Masbate's needs, institutional expertise, available resources, and national or international research priorities intersect. These areas can eventually become signature research programs for which DEBESMSCAT becomes recognized.

Congruence with Extension, Production, and Community Engagement

Another significant area of congruence is the relationship between research, extension, and production. DEBESMSCAT's mission explicitly integrates these functions rather than treating them as independent institutional activities. The Research Agenda can therefore serve as the evidence-generating foundation for extension and production initiatives.

Research identifies what communities need, why problems occur, which interventions are effective, and what innovations may be appropriate. Extension translates this knowledge into programs, training, technologies, and services. Production demonstrates the practical application and commercialization of knowledge and technologies. The cycle can then return to research through evaluation and feedback.

This research-extension-production continuum is particularly relevant to DEBESMSCAT's agricultural and technological orientation. Research outputs may be converted into demonstration projects, community technologies, livelihood programs, agricultural innovations, training packages, enterprise models, and other practical interventions.

The institution's 2026 operational planning explicitly recognized research and extension thrusts and community-based programs as important institutional priorities. This strengthens the argument that the Research Agenda should not end with research dissemination but should establish pathways for utilization, adoption, commercialization, and community impact.

Congruence with Local, National, and International Partnerships

The fourth mission statement emphasizes partnerships with multi-sectoral local, national, and international institutions for academic research, production, and community-based collaboration. This is another central area where the Research Agenda demonstrates institutional congruence.

Contemporary research increasingly requires collaboration. Complex challenges such as climate change, food security, digital transformation, poverty, public health, environmental degradation, education quality, and livelihood development cannot be adequately addressed by one discipline or institution. DEBESMSCAT's Research Agenda can therefore function as a platform for collaborative research involving government agencies, local government units, industries, non-government organizations, communities, other higher education institutions, research organizations, and international partners.

Partnership-based research can expand access to expertise, technology, laboratories, funding, datasets, publication opportunities, and international networks. DEBESMSCAT's recent renewal of academic partnership with Kansas State University, for example, illustrates the institution's continuing effort to strengthen international academic linkages.

Such partnerships support the institution's aspiration to become globally focused while retaining its commitment to Masbate. The desired model is therefore not globalization at the expense of local relevance, but global engagement in support of local transformation.

Congruence with Internationalization

Internationalization is explicitly embedded in DEBESMSCAT's mission through the provision of internationalized quality services. The Research Agenda contributes to internationalization by encouraging researchers to engage with global scholarship, international research standards, comparative studies, international conferences, peer-reviewed journals, cross-border research collaborations, and global development priorities.

Internationalization also means ensuring that research produced in Masbate can participate in broader knowledge conversations. Local research can become internationally significant when it addresses universal problems through context-specific evidence. For instance, research on agricultural resilience in Masbate can contribute to global discussions on climate adaptation; research on island and coastal communities can contribute to sustainability studies; research on rural education can inform international debates on educational equity and access.

The Research Agenda therefore creates a two-way pathway: international knowledge informs local research, while locally generated knowledge contributes to international scholarship.

Congruence with the RODEO Core Values

The Research Agenda is likewise congruent with DEBESMSCAT's core values of Resilience, Optimism, Dedication, Excellence, and Obeisance (RODEO). Research inherently requires resilience because researchers encounter failed hypotheses, methodological difficulties, resource limitations, and unexpected findings. It requires optimism because research is fundamentally an investment in the possibility of improvement. It requires dedication because meaningful research demands sustained intellectual and professional effort.

Excellence is reflected in the pursuit of methodological rigor, ethical research, credible evidence, high-quality publications, innovative outputs, and measurable impact. Obeisance, understood within the institutional value framework, reinforces respect for institutional mandates, ethical standards, laws, professional responsibilities, and the communities served by research.

Consequently, the Research Agenda is not simply a technical document. It can serve as a mechanism for translating institutional values into scholarly and community practices.

Congruence with Quality Assurance and Institutional Excellence

The Research Agenda also supports DEBESMSCAT's Quality Policy, which commits the institution to sustaining excellent service delivery in instruction, research, extension, and production while adhering to quality standards and legal requirements for optimum clientele satisfaction.

A research agenda contributes to quality assurance by providing measurable priorities and indicators. These may include research productivity, funded projects, publications, citations, patents and intellectual property, technologies developed, research utilization, community beneficiaries, external partnerships, student participation, faculty research capability, research income, and policy influence.

More importantly, research can generate evidence for continuous quality improvement across the institution. Program evaluations, tracer studies, stakeholder satisfaction studies, curriculum assessments, institutional performance analyses, and impact evaluations can provide information for improving academic and administrative systems.

Thus, research becomes part of the institution's quality cycle: plan, investigate, generate evidence, implement, evaluate, improve. This cycle reinforces DEBESMSCAT's commitment to continual institutional development.

Strategic Areas of Congruence

The overall congruence between the Research Agenda/Program and DEBESMSCAT's mission may be summarized through the following strategic areas:

DEBESMSCAT Mission Commitment	Research Agenda/Program Contribution	Expected Institutional Impact
Quality education, research, extension, and production	Evidence-based and problem-oriented research	Improved programs, services, policies, and practices
Accessible and data-driven quality service	Institutional and community-based studies	Evidence-informed decision-making
Internationalized quality service	International research collaboration and publication	Global visibility and competitiveness
Academically and skills-prepared graduates	Student research and research-integrated instruction	Stronger research, analytical, and employability competencies
Values-oriented and leadership-honed graduates	Research ethics, inquiry, collaboration, and leadership	Responsible and evidence-based professionals
Centers of Development and Excellence	Research clusters and flagship research programs	Institutional specialization and recognition
Transformation of Masbate	Place-based and community-responsive research	Socio-economic and community development
Local, national, and international partnerships	Collaborative and externally funded research	Expanded institutional networks and resources
Community-based collaboration	Participatory and action research	Research utilization and community empowerment
Quality assurance	Research-based evaluation and CQI	Sustainable institutional improvement

A.1.1.1 The Process of Planning

Process of Planning the Research Agenda of DEBESMSCAT

The implementation of DEBESMSCAT's strategic programs and projects begins with the systematic translation of the Strategic Development Plan into the Annual Operational Plan (AOP). This process ensures that the institution's long-term strategic directions are converted into specific, measurable, and achievable annual programs, projects, and activities.

During the Annual Operational Planning and Budgeting Workshop, each office, including Research and Publication Services identifies the programs and projects that contribute to the attainment of the institutional strategic objectives. These are incorporated into the respective Office Annual Operational Plans and aligned with the office's mandate, functions, performance targets, and available resources.

Strategic programs and projects are subsequently integrated into the Office Performance Commitment Review (OPCR) to establish clear office-level commitments and expected outputs. Annual performance targets are assigned to ensure that planned activities are measurable and can be monitored throughout the implementation period.

The planning process also identifies the budgetary and resource requirements necessary for the implementation of each program or project. This ensures that strategic priorities are appropriately supported by financial and other institutional resources and that resource allocation is aligned with approved institutional priorities.

To strengthen accountability, responsibilities are cascaded from the office level to individual personnel through the Individual Performance Commitment Review (IPCR). Individual targets and deliverables are aligned with the commitments of the respective offices and, ultimately, with the Strategic Development Plan.

Through this cascading mechanism, DEBESMSCAT establishes a clear linkage among the Strategic Development Plan, Annual Operational Plan, budget, OPCR, and IPCR. Consequently, every office and employee is provided with a defined responsibility and measurable contribution toward the implementation of institutional priorities.

The planning of the Research Agenda of the Dr. Emilio B. Espinosa, Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT) is conceived as a strategic, participatory, evidence-based, and forward-looking process. Rather than treating the Research Agenda as a simple list of preferred research topics, the institution approaches agenda-setting as a mechanism for translating its mandate, institutional priorities, regional development needs, national development imperatives, and global trends into a coherent set of research priorities. This approach recognizes that the relevance of a state college is determined not only by the quantity of research it produces but also by the extent to which its research addresses significant problems, generates usable knowledge and innovation, strengthens academic programs, supports evidence-informed governance, and contributes to the sustainable development of the communities it serves.

For DEBESMSCAT, the planning process is particularly important because of its distinctive mandate and geographical context in Masbate. The institution operates within a province where agriculture, natural resources, education, entrepreneurship, rural development, environmental sustainability, disaster resilience, livelihood, and community empowerment are central development concerns. Consequently, the Research Agenda must balance institutional academic priorities with the practical needs of Masbate and the Bicol Region while remaining responsive to national science, technology, education, and development priorities.

The planning process is therefore anchored on a four-level convergence framework: institutional imperatives, regional imperatives, national imperatives, and global trends. These four dimensions are subsequently integrated through consultation, environmental scanning, priority-setting, validation, resource assessment, implementation planning, and monitoring.



The DEBESMSCAT Research Agenda

 Republic of the Philippines DR. EMILIO B. ESPINOSA SR., MEMORIAL STATE COLLEGE OF AGRICULTURE AND TECHNOLOGY Cabanatuan, Mandan, Masbate www.debesmscat.edu.ph MANUAL Quality Management System	 Republic of the Philippines DR. EMILIO B. ESPINOSA SR., MEMORIAL STATE COLLEGE OF AGRICULTURE AND TECHNOLOGY Cabanatuan, Mandan, Masbate www.debesmscat.edu.ph MANUAL Quality Management System
Document Control Number: DEBESMSCAT-RDS-QMS Similar to the DEBESMSCAT Institutional Strategic Plan formulation, SWOT analysis and PESTLE (political, economic, social, technological, legal and environmental) analysis, among others, are used to identify relevant internal and external issues. Understanding the internal context can be facilitated by considering issues related to values, culture, knowledge, and performance of the DEBESMSCAT while the external context can be facilitated by considering issues arising from legal, technological, competitive, market, cultural, social, and economic environments, whether international, national, regional or local. The output from this analysis is made evident as input to the consideration of risks and opportunities, including the actions taken as necessary to address them. 4.3 Research Agenda of Colleges College of Agriculture 1. Water and Food Security 2. Natural Resource and Environment 3. Crops and Livestock 4. Food Innovation College of Arts and Sciences Consolidated Research Agenda: Sustainable Economic Growth through Innovation, Digital Transformation, and Inclusivity 1. Tech-Driven Entrepreneurship and Economic Growth 2. Financial Management and Gender Empowerment 3. Sustainability and Innovation in Agriculture and Circular Economy 4. Community Empowerment and ICT for Development 5. Public Administration College of Education (excerpt from CMOs governing each program) Consolidated Research Agenda: Advancing Education, Empowerment, and Societal Development 1. Teaching, Learning, and Curriculum Development 2. Empowerment and Development 3. Language, Literature, and Cultural Studies 4. Law, Government, and Politics for Educational Policy Development College of Industrial Technology 1. Food Manufacturing and Production Technologies 2. Renewable Energy, Emerging and Sustainable Technologies 3. Technical Education and Skills Development Effectivity Date: September 1, 2025 Rev. No.: 00 Page 21 of 89	Document Control Number: DEBESMSCAT-RDS-QMS 4. Automation, and Smart Systems 5. Product Design, Prototyping, and Innovation Graduate School 1. Assessment methods development 2. Integration of Science and Technology 3. Cultural Integration and Blended Learning 4. Test Development Process 5. STEM Education College of Engineering Cawayan Campus 4.4 - Understanding the Needs and Expectations of Relevant Stakeholders³ The RDS Unit clearly understands its relevant stakeholders, which include students, students' parents and family, DEBESMSCAT management and staff, industries, suppliers, peoples organization, LGUs and other key external stakeholders. Through analysis, the needs and expectations of these relevant stakeholders are listed in Annex A - List of Needs and Expectations of Relevant Stakeholders, are identified and considered during planning activities. 4.4 - Scope of the RDS QMS This QMS Manual will cover the Research and Development Services Unit. This manual also recognizes procedures from oversight agencies such as the Philippine Government Accounting Rules and Regulations, issuances and circulars set forth by the Department of Budget Management, the Commission on Audit, the Civil Service Commission, National Privacy Commission and others. Furthermore, this manual also covers leadership, management and supervision of all research, extension and innovation centers of the DEBESMSCAT. For externally funded projects, management and supervision shall be in coordination with the funding organization and in consonance with the Memorandum of Agreement and Contract signed by the DEBESMSCAT and the involved party (ies). 4.5 - RDS QMS and its Process The RDS Unit determines the processes needed for the effective implementation of its QMS and adopts a process approach while considering the Plan-Do-Check-Act (PDCA) cycle. The RDS Division's business process map shown in Figure 4 is divided into three groups of processes, namely: • Division – level Management Processes - those needed for oversight and governance of College's/College's QMS. • Operational Processes - are needed to realize the planned activities in performing processes and allow DEBESMSCAT to deliver the intent of the output of the Effectivity Date: September 1, 2025 Rev. No.: 00 Page 22 of 89

1. Institutional Imperatives as the Starting Point

The first stage in planning the DEBESMSCAT Research Agenda is the identification of institutional imperatives. These imperatives are derived from the institution's vision, mission, core values, strategic development plans, academic programs, research capacity, extension priorities, innovation directions, and aspirations for institutional development.

DEBESMSCAT's research planning is closely connected with its broader institutional planning. The College has undertaken strategic planning activities designed to anticipate future challenges, assess risks, envision institutional directions, and establish a development roadmap. In January 2024, DEBESMSCAT conducted a Strategic Planning 2024–2028 activity under the theme “Re-Think, Re-Plan, Re-Create: A Strategic Approach to Future Challenge,” involving key officials, deans, directors, department heads, and unit heads. The process included envisioning the future of the institution, risk assessment and management, anticipation of challenges, foresight, and roadmap development.



This planning tradition establishes an important principle for the Research Agenda: research priorities must contribute directly to the institution's strategic direction.

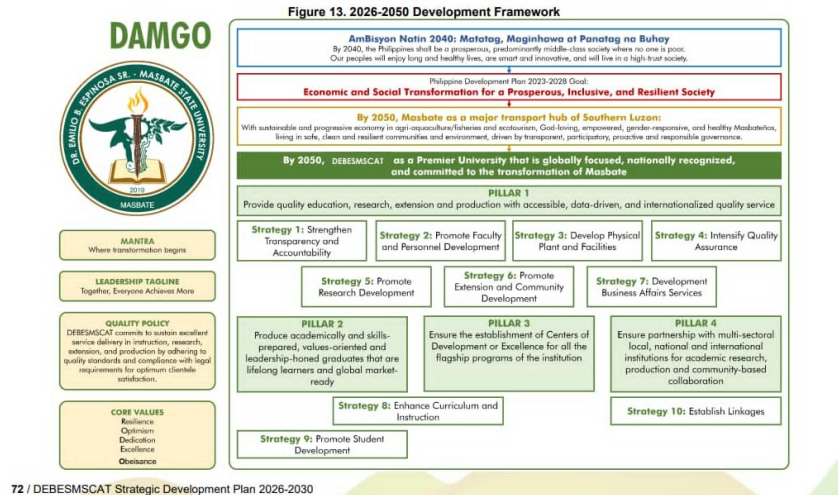
The institutional scanning process considers questions such as:

- What are DEBESMSCAT's existing research strengths?
- What are the priority concerns of its academic programs?
- What research capabilities and expertise are available among faculty and researchers?
- What institutional problems require evidence-based investigation?
- What areas have potential for innovation, technology development, commercialization, and extension?
- What research infrastructure and resources are available?
- What institutional research gaps must be addressed?
- What research areas can establish DEBESMSCAT as a recognized center of expertise?
- How can research contribute to the institution's aspiration for greater national and international recognition?

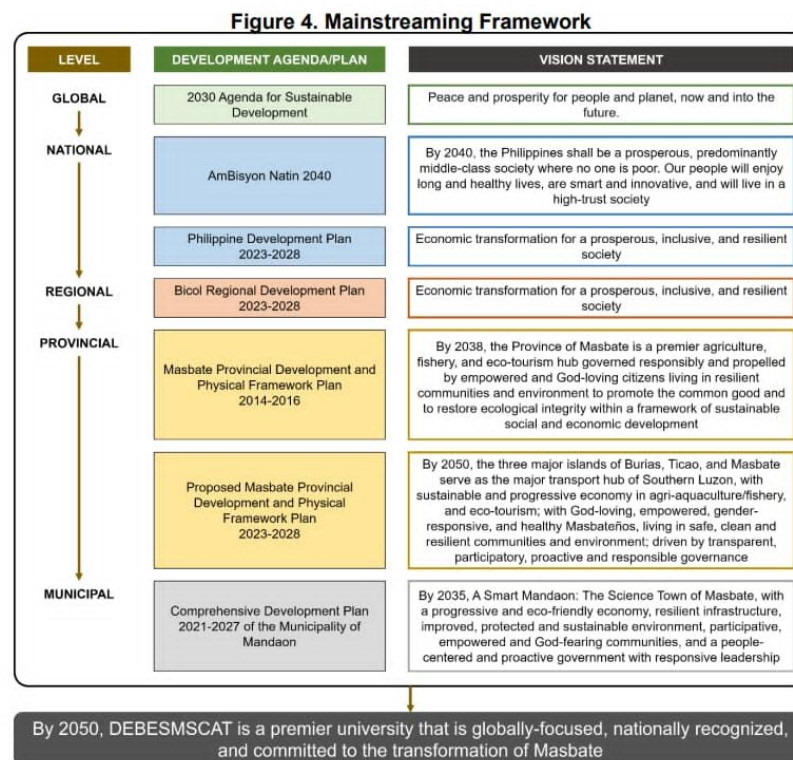
The Research Agenda consequently becomes an instrument for institutional differentiation. It provides a mechanism for concentrating limited research resources on areas where DEBESMSCAT possesses expertise, where significant development needs exist, and where research can produce measurable institutional and community impact.

2. Alignment with the Institutional Strategic Planning Framework

DEBESMSCAT Strategic Planning Framework



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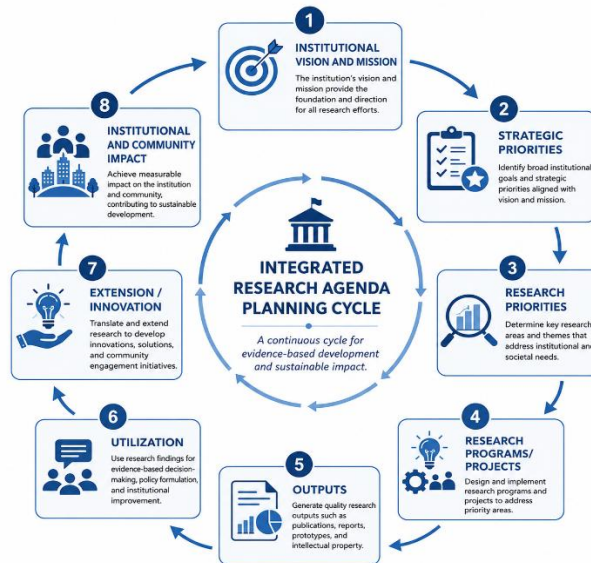


A second institutional consideration is the alignment of research planning with the institution's strategic development framework. The research agenda does not operate independently from instruction, extension, innovation, production, internationalization, and governance. Instead, these functions are connected through an integrated research and development ecosystem.

This orientation is evident in DEBESMSCAT's operational planning. During its 2026 operational planning, research and extension thrusts were explicitly included among the major institutional priorities. The Office of the Vice President for Research, Development, Extension, Innovation, Creative Works, and Knowledge Management presented the institution's research agenda, while extension priorities and community-based programs were likewise incorporated into the planning process.

The research agenda planning follows an integrated cycle

Integrated Cycle for Research Agenda Planning



The cycle begins with the institutional vision and mission, which establish the institution's long-term direction, purpose, and commitment to addressing educational, social, economic, and community needs. These guide the identification of strategic priorities, which define the key areas that require focused institutional attention and development.

From these strategic priorities, the institution identifies its research priorities—specific issues, challenges, and knowledge gaps that research should address. These priorities serve as the foundation for developing and implementing research programs and projects. Through these activities, researchers generate outputs, such as new knowledge, technologies, innovations, publications, policies, models, and other research-based products.

Research should not end with the production of outputs. The next stage involves utilization, where research findings and innovations are applied to actual institutional, educational, industry, or community needs. Through extension and innovation, research-based knowledge and solutions are further disseminated, adapted, improved, and transferred to intended beneficiaries and stakeholders.

Ultimately, these efforts contribute to institutional and community impact. Research can improve institutional policies and practices, enhance services, address community problems, support innovation, and contribute to social and economic development. These impacts, in turn, generate new needs, emerging issues, and opportunities for improvement, which can inform the institution's future strategic and research priorities.

This cycle ensures that research does not remain an isolated academic activity. Instead, research becomes a driver of institutional development.

3. Identification of Institutional Research Gaps and Capacity

After establishing institutional imperatives, the planning process involves an assessment of research capacity and gaps. This includes examining faculty expertise, research productivity, completed and ongoing studies, publications, research funding, research facilities, laboratories, information resources, research partnerships, intellectual property, extension utilization, and student research participation.

The purpose is to determine the difference between what DEBESMSCAT currently has the capacity to do and what the institution needs to accomplish in the future. For example, if the institution has substantial expertise in agriculture but limited research capability in digital agriculture, climate-smart farming, precision agriculture, biotechnology, or value-chain innovation, these gaps may become priorities for faculty development, partnerships, and research investment.

Similarly, if research productivity is concentrated among a limited number of researchers, the agenda may need to include research capability-building, mentoring, interdisciplinary teams, research management, publication support, statistical and methodological training, and external funding development.

Thus, the Research Agenda is not only a statement of thematic priorities. It is also a capacity-building framework.

4. Consultation and Participatory Agenda-Setting

A major principle in planning the DEBESMSCAT Research Agenda is participation. Research priorities should not be imposed solely by senior management or the research office. They should emerge from consultation with those who will implement, use, and benefit from research.

Consultation involves the College President, vice presidents, research director, deans, research program chairs, faculty researchers, students, extension personnel, innovation and intellectual property personnel, planning officers, administrative units, and other stakeholders. External stakeholders may include local government units, national government agencies, industries, farmers, fisherfolk, community organizations, civil society organizations, alumni, partner institutions, and other beneficiaries.

This participatory approach helps ensure that the agenda represents both institutional aspirations and stakeholder needs.

The consultation process can involve workshops, focus group discussions, surveys, key informant interviews, research fora, strategic planning sessions, technical workshops, and priority-ranking exercises. Stakeholders may be asked to identify major problems, emerging opportunities, research gaps, technological needs, policy concerns, and development priorities.

The output of consultation is a broad inventory of potential research concerns that can subsequently be screened and prioritized.

5. Regional Imperatives: Masbate and the Bicol Region

The second major level of agenda planning is the regional context. DEBESMSCAT's Research Agenda must recognize that the institution is located within Masbate and the Bicol Region and therefore has a responsibility to contribute to regional development.

The Bicol Regional Development Plan (RDP) 2023–2028 provides an important reference point. The Bicol Regional Development Council adopted the RDP as the blueprint for regional development and explicitly aligned it with the Philippine Development Plan 2023–2028.

The Bicol Regional Development Plan (RDP) 2023–2028



For DEBESMSCAT, this regional alignment is particularly important because many of the development challenges identified in the Bicol RDP correspond closely to the institution's academic and research capabilities.

The regional agenda emphasizes concerns such as agricultural productivity, fisheries, food security, livelihood diversification, technology adoption, climate adaptation, rural development, and innovation. The Bicol RDP specifically calls for strengthening research and development capacity to promote innovation in farm and fishery technologies, including better seeds, pest and disease management, extension services, climate change adaptation, value addition, and shelf-life technologies. It also identifies the importance of midstream and downstream R&D and technology localization at the farm level.

These regional imperatives provide a strong basis for DEBESMSCAT to prioritize research in agriculture, fisheries, livestock, natural resources, food technology, climate-smart production, rural entrepreneurship, agricultural extension, value-chain development, and appropriate technologies.

6. Masbate-Specific Development Concerns

Within the broader Bicol framework, the Research Agenda must further localize research priorities to Masbate. This localization is essential because province-level conditions may differ substantially from regional averages.

Masbate's agricultural and rural character creates research opportunities concerning food production, livestock, fisheries, agricultural mechanization, post-harvest technologies, agribusiness, livelihood diversification, rural entrepreneurship, natural resource management, and community development.

Likewise, the province's exposure to typhoons, flooding, drought, and other environmental risks creates a need for research on disaster preparedness, climate adaptation, resilient livelihoods, environmental management, and community resilience.

Education is another major area. Research can address teacher development, school leadership, digital learning, curriculum relevance, learner achievement, educational technology, inclusive education, and the transition of graduates into employment or entrepreneurship.

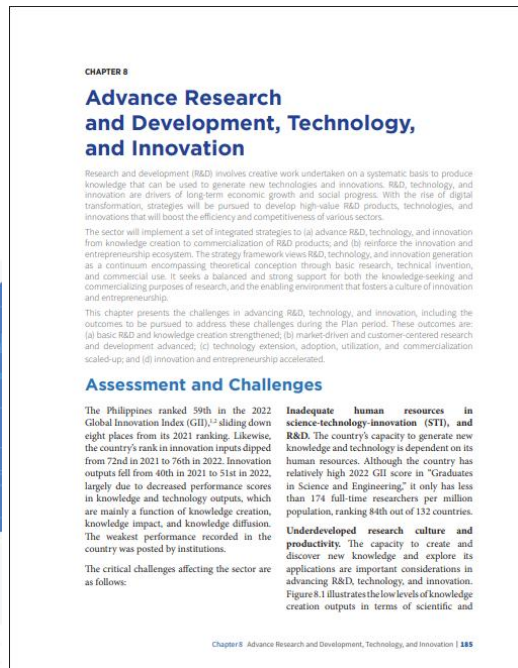
Other research priorities may emerge from local concerns involving tourism, cultural heritage, creative industries, public administration, health and well-being, gender and development, digital transformation, small and medium enterprises, and sustainable resource use.

The fundamental principle is that the research agenda should be sufficiently local to respond to Masbate's realities while sufficiently broad to contribute to regional, national, and global knowledge.

The third level of agenda planning is national alignment. As a Philippine state higher education institution, DEBESMSCAT must ensure that its Research Agenda contributes to national development priorities and responds to the research directions established by national government agencies.

The Philippine Development Plan (PDP) 2023–2028 is a major national reference. It seeks deep economic and social transformation, inclusive growth, poverty reduction, job creation, and a more innovative and globally competitive economy.

The Philippine Development Plan (PDP) 2023–2028



Insufficient spending on R&D. The country's gross expenditure on R&D (GERD) stands at 0.32% percent, which is substantially below the global average of 0.40 percent and 1 percent of the government recommended by the United Nations Educational, Scientific, and Cultural Organization. The government share to the total R&D expenditure is at 39 percent, while the private sector is at 61 percent. The 2022 GI ranked the Philippines 75th in GERD.

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Barriers to building an innovative and entrepreneurial culture. Challenges remain at the formation level, such as instilling the value of innovation and entrepreneurship, integrating this orientation in the education curriculum at all levels, and reskilling human resources. Business regulation issues remain challenging

Notwithstanding these challenges, there are positive directions in the development of the country's R&D, technology and innovation infrastructure as evidenced by new laws, policy actions, and various initiatives taken in the last six years.⁹

The strategy framework illustrates the areas of focus in the R&D, technology, and innovation generation continuum. There are four desired outcomes: (a) basic R&D and knowledge creation strengthened; (b) market-driven

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These priorities provide a national policy environment within which DEBESMSCAT can identify research areas with strategic relevance and potential funding opportunities.

8. Science, Technology, Innovation, and Commercialization

National imperatives also require DEBESMSCAT to move research beyond knowledge generation toward innovation and utilization. The PDP emphasizes a dynamic innovation ecosystem involving researchers, engineers, entrepreneurs, industries, and other stakeholders. It also supports basic research, market-driven R&D, technology adoption, commercialization, and entrepreneurship.

9. Higher Education Policy and CHED Imperatives

The planning process also considers the higher education policy environment established by the Commission on Higher Education (CHED). CHED's Office of Planning, Research and Knowledge Management is tasked with directing the formulation of higher education R&D agendas, monitoring implementation, evaluating outputs and impacts, assessing research capacity and productivity, and developing research infrastructure and enabling policies.



EXECUTIVE SUMMARY

The CHED A.C.H.I.E.V.E. Reform Architecture

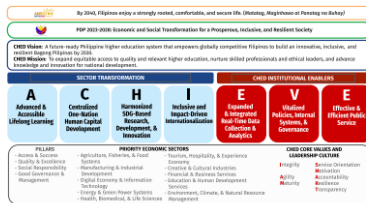
The CHED A.C.H.I.E.V.E. Reform Architecture provides the strategic structure through which the Commission on Higher Education (CHED) advances the transformation of Philippine higher education toward 2030 and beyond. The architecture integrates sector-wide priorities, institutional reforms within CHED, and a shared leadership culture into a coherent framework for guiding policy, programs, and institutional collaboration across the higher education system.

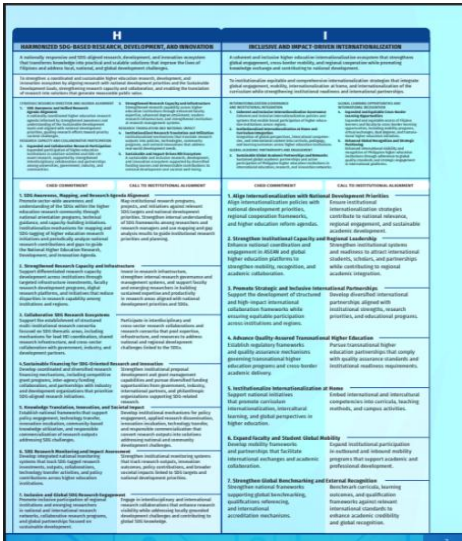
At the sector level, the A.C.H.I.E.V.E. Agenda defines key transformation priorities for Philippine higher education. These priorities promote expanded lifelong learning opportunities, stronger alignment between higher education and national human capital development, research and innovation responsive to the Sustainable Development Goals, meaningful international engagement, and the development of a modern higher education data and analytics ecosystem. Within the framework, these priorities are organized through impact statements, outcomes, goals, and strategic objectives that guide coordinated sector progress.

Supporting these sector priorities are institutional reforms within CHED, articulated through the E.I.E. Institutional Enablers. These reforms strengthen governance systems, modernize public service delivery, and institutionalize integrated digital and data platforms that enhance CHED's capacity to effectively steward the higher education sector.

The reform architecture is further grounded in CHED's leadership culture embodied in the **10M SMART** core values – Integrating, Agility, Meritocracy, Service Orientation, Motivation, Accountability, Resilience, and Transparency – which guide how reforms are implemented and how public service is delivered.

This brochure presents the full architecture of the A.C.H.I.E.V.E. Agenda, including the sector transformation framework, CHED institutional enablers, and the key performance indicators and indicative targets that will guide the sector's progress in the years ahead.





This reinforces the need for DEBESMSCAT's Research Agenda to incorporate measurable research outputs and outcomes rather than merely listing research themes.

The agenda has indicators such as:

- a. number and quality of completed research projects;
- b. externally funded research;
- c. peer-reviewed publications;
- d. citations;
- e. intellectual property outputs;
- f. technologies developed or adopted;
- g. policy recommendations utilized;
- h. research partnerships;
- i. community beneficiaries;
- j. student participation;
- k. research commercialization;
- l. research capability development; and
- m. demonstrable institutional and societal impact.

10. Global Trends and Emerging Research Directions

The fourth level of agenda planning is global scanning. DEBESMSCAT must anticipate global trends that will affect higher education, research, communities, industries, and employment.

One of the most significant trends is artificial intelligence and digital transformation. UNESCO reports that AI and digital tools are disrupting education systems worldwide, creating opportunities for improved planning and management while also raising concerns about inequality, privacy, ethics, bias, and responsible implementation.

UNESCO's 2025 global survey likewise found that nearly two-thirds of higher education institutions hosting UNESCO Chairs or UNITWIN networks either already had AI guidance or were developing it, demonstrating the increasing institutional importance of responsible AI.

For DEBESMSCAT, this global trend suggests research opportunities involving artificial intelligence in education, digital agriculture, data analytics, smart governance, research automation, digital inclusion, cybersecurity, AI ethics, and technology-enabled community development.

11. Sustainability and Climate Resilience

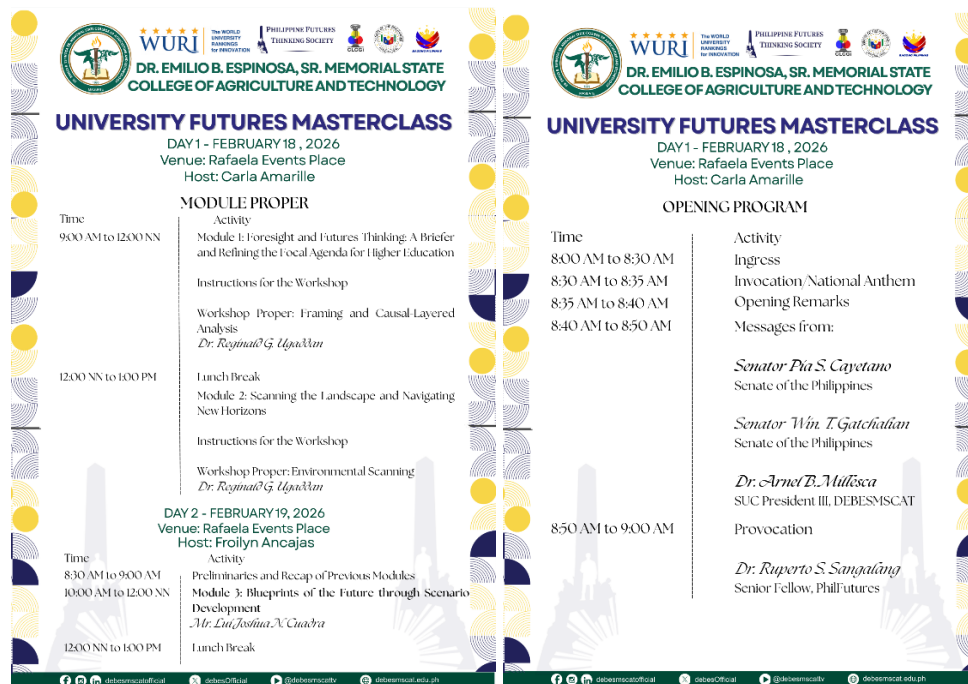
Another major global trend is the increasing emphasis on sustainability, climate change, biodiversity, and environmental stewardship. These trends have particular significance for Masbate and the Bicol Region because agriculture, fisheries, coastal resources, rural livelihoods, and community resilience are highly sensitive to environmental change.

Global higher education discussions increasingly emphasize sustainability as a core institutional responsibility. UNESCO's 2026 roadmap for transforming higher education identifies sustainability, stewardship, regeneration, equity, collaboration, critical inquiry, human-centered technology, and relevance as important principles for the future of higher education.

12. Futures Thinking and Anticipatory Research

An important distinguishing feature of the DEBESMSCAT agenda-setting process is the integration of futures thinking. The institution has established a Futures Thinking orientation and developed a Strategic Roadmap Towards Sustainable Development, Innovation and Futures Thinking 2025–2029. The roadmap seeks to embed foresight, innovation, and sustainability-driven strategies into instruction, research, extension, and governance.





DEBESMSCAT has also participated in futures-oriented initiatives that explore future scenarios involving work, education, health, agriculture and food security, technology, and tourism. These activities demonstrate an institutional effort to move from reactive research toward anticipatory research.

This is important because traditional research agendas often respond to existing problems. A future-oriented research agenda additionally asks: What problems are emerging? What technologies are likely to disrupt current practices? What skills will future graduates need? What industries may emerge? What environmental risks may intensify? What institutional capabilities must be developed today to prepare for tomorrow?

This anticipatory dimension allows DEBESMSCAT to become proactive rather than merely reactive.

13. Integration and Prioritization of Research Themes

After institutional, regional, national, and global scanning, the identified research concerns are consolidated into thematic clusters. Potential themes are evaluated according to several criteria: Relevance, Urgency, Institutional competence, Potential impact, Innovation potential, Funding potential, Partnership potential, Sustainability, Scalability, Alignment

Through this process, numerous potential research topics are transformed into a smaller number of strategic research programs.

14. Validation and Institutional Approval

The proposed Research Agenda subsequently undergo technical and stakeholder validation. Research experts assess methodological and disciplinary coherence, while academic and administrative units assess institutional feasibility. External stakeholders help determine whether the identified priorities correspond to actual development needs.

Validation also ensures that research themes do not duplicate one another unnecessarily and that interdisciplinary opportunities are identified.

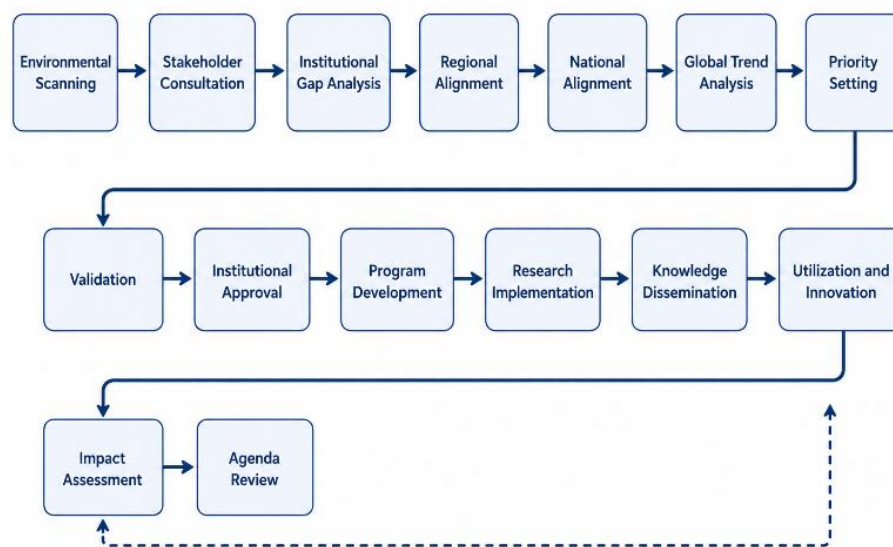
The final agenda is then submitted through the appropriate institutional governance mechanisms for approval, adoption, implementation, and periodic review.

This governance process is important because a research agenda is a living institutional document. It should be sufficiently stable to provide strategic direction but sufficiently flexible to respond to emerging issues, new technologies, funding opportunities, policy changes, disasters, economic shifts, and other unexpected development.

15. From Research Agenda to Implementation

The final stage is translating the approved agenda into implementable research programs and projects. Each priority area should be supported by specific programs, measurable objectives, target outputs, responsible units, timelines, funding requirements, partnership strategies, and performance indicators.

At DEBESMSCAT, this implementation is connected with the functions of research and development, extension, innovation, creative works, knowledge management, instruction, and institutional planning.



This cycle ensures that the Research Agenda remains dynamic and responsive.

A.1.1.2 Participants in the Planning

Composition of the Research Agenda Planning Committee

The Research Agenda Planning Committee of the Dr. Emilio B. Espinosa, Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT) is constituted as a multidisciplinary, participatory, and institution-wide body representing the major academic, research, extension, innovation, planning, quality assurance, and administrative units of the College. The composition of the Committee reflects the principle that the institutional Research Agenda is not developed by the research office alone. Rather, it emerged from the collective expertise of academic leaders, researchers, program representatives, planning and quality assurance personnel, extension and innovation practitioners, and stakeholders who understand the development priorities of Masbate.

The Committee is organized under the authority of the College President and coordinated by the Office of the Vice President for Research, Development, Extension, Innovation, Creative Works and Knowledge Management. Its membership combine institutional leadership, technical research expertise, disciplinary representation, development planning competence, and stakeholder perspectives.

The composition is designed to ensure that the Research Agenda is aligned with the DEBESMSCAT mandate, institutional strategic priorities, regional development concerns, national research priorities, and emerging global trends.

A. Composition of the Planning Committee

Committee Position/Representation	Minimum/Preferred Qualification	Unit Represented	Primary Role in Research Agenda Planning
Chairperson – College President	Doctorate degree preferred; extensive academic and administrative leadership experience; recognized institutional authority	Office of the President	Provides strategic direction, institutional authority, and final leadership oversight
Vice Chairperson – Vice President for Research, Development, Extension, Innovation, Creative Works and Knowledge Management	Doctorate degree; demonstrated research and research-management experience; preferably with scholarly publications and research leadership experience	Office of the Vice President for Research, Development, Extension, Innovation, Creative Works and Knowledge Management	Leads the technical and strategic development of the Research Agenda
Executive/Technical Secretariat – Director for Research and Development	Advanced degree preferably with research experience; demonstrated competence in research management, proposal development, monitoring, and evaluation	Research and Development Unit/Office	Coordinates meetings, consultations, documentation, research mapping, and consolidation of outputs
Representative – Office of the Vice President for Academic Affairs	Doctorate degree or relevant graduate qualification; substantial academic leadership experience	Office of the Vice President for Academic Affairs	Ensures alignment of research priorities with instruction, curriculum, faculty development, and academic programs
Representative – Office of the Vice President for Administration and Finance	Graduate degree and substantial administrative/financial management experience	Administration and Finance	Assesses financial, human-resource, infrastructure, and operational requirements of the Research Agenda
Representative – Office of the Vice President for Extension/Community Engagement	Graduate degree; demonstrated experience in extension, community development, or participatory research	Extension/Community Engagement	Ensures that research priorities respond to community needs and facilitate research utilization
Representative – Planning and	Graduate degree or appropriate professional qualification; experience in institutional	Planning and Development	Aligns research priorities with the institutional

Committee Position/Representation	Minimum/Preferred Qualification	Unit Represented	Primary Role in Research Agenda Planning
Development Office	planning, development programming, and monitoring		development plan, targets, programs, and performance indicators
Representative – Quality Assurance/Accreditation Unit	Graduate degree; experience in quality assurance, accreditation, assessment, and institutional evaluation	Quality Assurance/Accreditation	Ensures that research planning supports quality assurance, accreditation, continuous improvement, and evidence-based institutional development
Dean/Representative – Graduate School	Doctorate degree; senior academic rank and demonstrated research experience	Graduate School	Represents graduate research, thesis/dissertation priorities, advanced research training, and postgraduate research productivity
Dean/Representative – College of Agriculture/Fisheries or Agriculture-related Academic Unit	Doctorate/master's degree in a relevant discipline; research and professional experience	Agriculture-related Academic Unit	Represents agriculture, food security, livestock, fisheries, natural resources, and rural development research
Dean/Representative – College of Education	Doctorate degree preferably; substantial teaching, research, and academic leadership experience	Teacher Education/Education Unit	Represents education, pedagogy, educational leadership, curriculum, teacher development, and learner outcomes
Dean/Representative – College of Engineering/Technology	Doctorate/master's degree in engineering, technology, or related discipline; relevant research experience	Engineering/Technology Unit	Represents engineering, appropriate technology, digital transformation, automation, energy, and technological innovation
Dean/Representative – College of	Doctorate/master's degree in business, management,	Business/Management Unit	Represents entrepreneurship, enterprise

Committee Position/Representation	Minimum/Preferred Qualification	Unit Represented	Primary Role in Research Agenda Planning
Business/Management	economics, entrepreneurship, or related field		development, innovation, tourism, finance, and local economic development
Dean/Representative – Social Sciences/Humanities or Related Programs	Doctorate/master's degree in relevant discipline; research and community engagement experience	Social Sciences/Humanities	Represents social development, governance, culture, gender, community studies, and other socio-cultural concerns
Faculty Researcher Representative	Senior faculty member with demonstrated research productivity, peer-reviewed publications, or completed externally/institutionally funded research	Faculty/Academic Departments	Provides faculty-level perspectives and ensures feasibility of proposed research priorities
Student Research Representative	Qualified undergraduate/graduate student with research experience and good academic standing	Student Body/Graduate Student Community	Represents student research interests, emerging research concerns, and student participation in research
Innovation and Intellectual Property Representative	Graduate degree or appropriate professional qualification; experience in innovation, intellectual property, technology transfer, or commercialization	Innovation/IP/Technology Transfer Unit	Links research priorities with innovation, intellectual property, technology transfer, and commercialization
Knowledge Management/Research Dissemination Representative	Graduate degree or relevant professional qualification; experience in knowledge management, scholarly communication, or research dissemination	Knowledge Management/Research Dissemination Unit	Develops mechanisms for knowledge sharing, research utilization, documentation, and dissemination
Institutional Research/Statistics/Data Management Representative	Graduate degree or demonstrated competence in statistics, data science, research methodology, or institutional research	Institutional Research/Data Management	Provides evidence, institutional data, research indicators, and analytical support for priority setting
External Stakeholder Representative –	Senior LGU official or technical officer with knowledge of local development priorities	Province/Municipality/Barangay LGU	Ensures responsiveness to local development needs and

Committee Position/Representation	Minimum/Preferred Qualification	Unit Represented	Primary Role in Research Agenda Planning
Local Government Unit			government priorities
External Stakeholder Representative – Industry/Private Sector	Industry practitioner, entrepreneur, business leader, or technical expert	Industry/Business Sector	Identifies industry research needs, technology opportunities, employability concerns, and commercialization pathways
External Stakeholder Representative – Community Sector	Recognized community leader, farmer/fisherfolk representative, cooperative officer, NGO representative, or civil society practitioner	Community/Civil Society	Represents beneficiary needs and community-level research priorities
External Research Expert/Partner	Doctorate degree and established research record; preferably with peer-reviewed publications and research-management experience	Partner HEI/Research Institution	Provides independent technical review, benchmarking, and external perspective
Documentation and Secretariat Support	Administrative/research personnel with competence in documentation, records management, and technical writing	Research Office	Maintains minutes, consultation records, matrices, drafts, attendance, evidence, and final documentation

B. Qualifications of Committee Members

Membership in the Planning Committee is based not merely on administrative position but on the member's capacity to contribute meaningfully to research agenda development. As a general qualification, members should possess appropriate academic preparation, professional experience, institutional knowledge, and demonstrated competence relevant to their assigned roles.

Academic leaders representing colleges and academic units should preferably hold doctoral degrees or appropriate advanced degrees and should have substantial experience in instruction, research, curriculum development, academic administration, and faculty development. Where the position is technical rather than academic, relevant professional qualifications and demonstrated expertise should be considered.

Research representatives should preferably have completed or supervised research projects, published in peer-reviewed journals, presented research in scholarly conferences, secured or managed research grants, or participated in research evaluation. Experience in research methodology, statistics, research ethics, intellectual property, publication, technology transfer, or research project management should likewise be considered.

External members should be selected based on their knowledge of the development conditions of Masbate, their sectoral expertise, and their ability to articulate research needs from outside the College. Their inclusion is important because an institutional Research Agenda should reflect the needs of research users and beneficiaries, not only the interests of researchers.

C. Representation of Major DEBESMSCAT Units

The composition of the Committee deliberately follows a whole-of-institution approach. The Office of the President provides overall institutional leadership, while the Office of the Vice President for Research, Development, Extension, Innovation, Creative Works and Knowledge Management provides the technical leadership for the agenda-setting process.

The Office of the Vice President for Academic Affairs ensures that research priorities are connected with instruction and academic program development. The Graduate School provides representation for advanced research and postgraduate studies. Academic colleges ensure disciplinary diversity, while planning and quality assurance offices connect research priorities with institutional performance, development planning, accreditation, and continuous quality improvement.

Extension representation ensures that research is connected with communities. Innovation and intellectual property representation ensures that potentially useful research outputs can be translated into technologies, products, services, creative works, or policy innovations. Knowledge management representation strengthens research dissemination and utilization.

The inclusion of Administration and Finance is equally important because the Research Agenda must be financially and operationally feasible. Research priorities require funding, laboratories, equipment, personnel, information resources, fieldwork support, publication assistance, and partnership arrangements. Consequently, financial and administrative considerations should be incorporated during agenda planning rather than after priorities have already been finalized.

D. Role of the Research Office

The Office of the Vice President for Research, Development, Extension, Innovation, Creative Works and Knowledge Management serves as the principal technical coordinating unit of the Planning Committee. It facilitates the systematic collection and analysis of information necessary for agenda development, including previous research outputs, faculty expertise, research productivity, ongoing projects, research funding, research facilities, community needs, external research priorities, and emerging trends.

The Research Office also prepare the initial research mapping and environmental scanning documents. These documents identify institutional research strengths and gaps, Masbate development concerns, Bicol Regional Development Plan priorities, national research and development priorities, and major global research trends.

The Office subsequently consolidate the results of stakeholder consultations and priority-ranking activities and prepare the draft Research Agenda for technical review and institutional validation.

E. Role of Academic and Disciplinary Representatives

Academic representatives identify research priorities emerging from their respective disciplines and academic programs. They assess the research capabilities of their faculty members and identify areas where interdisciplinary collaboration may produce stronger outcomes.

For DEBESMSCAT, disciplinary representation is particularly important because the institution has an applied and development-oriented character. Agriculture, technology, education, business, entrepreneurship, environmental management, community development, and other disciplines can contribute complementary perspectives to complex problems.

For example, a research program on agricultural productivity may require agricultural science, engineering, business, education, information technology, and community development expertise. Similarly, research on rural education may require expertise in pedagogy, educational leadership, digital technology, sociology, psychology, and community engagement.

The Committee therefore encourage interdisciplinary and transdisciplinary research clusters rather than organizing the agenda exclusively according to traditional academic departments.

F. Role of External Stakeholders

External stakeholder representation is necessary to prevent the Research Agenda from becoming inward-looking. Local government representatives can identify priority development problems, while industry representatives can articulate technology, workforce, production, and innovation needs. Community representatives can provide direct information about problems experienced by intended beneficiaries.

For an institution committed to the transformation of Masbate, community participation is especially important. Farmers, cooperatives, entrepreneurs, local communities, schools, local government units, and other stakeholders have opportunities to articulate the problems they want research to address.

External stakeholders can therefore contribute to the assessment of research relevance, urgency, feasibility, potential impact, and opportunities for adoption.

G. Committee Structure and Working Mechanism

The Planning Committee may organize itself into technical working groups corresponding to major stages of the agenda-setting process. Suggested working groups include:

1. Institutional Research Assessment Group
2. Regional and Community Needs Assessment Group
3. National Policy and Research Alignment Group
4. Global Trends and Futures Research Group
5. Research Thematic Clustering Group
6. Resource and Feasibility Group
7. Monitoring, Evaluation, and Impact Group

This structure allows the full committee to provide strategic oversight while technical groups conduct detailed analysis.

H. Guiding Principle for Committee Membership

The fundamental principle in forming the Planning Committee is representation with responsibility. Every member should represent not only a unit but also a body of expertise, stakeholder concerns, and institutional interests. Membership should therefore be accompanied by clearly defined responsibilities, expected outputs, and accountability for participation.

The Committee should work toward a Research Agenda characterized by the following principles:

Relevant: responds to actual institutional, community, regional, national, and global problems;

Evidence-based: grounded in credible data and systematic environmental scanning;

Participatory: incorporates faculty, students, administrators, external stakeholders, and research users;

Interdisciplinary – encourages collaboration across academic and professional fields;

Innovative: supports new knowledge, technologies, products, services, and models;

Sustainable: contributes to long-term environmental, social, economic, and institutional development;

Future-oriented: anticipates emerging challenges and opportunities;

Utilization-oriented: provides pathways for research results to influence policy, practice, extension, production, and innovation; and

Quality-driven: adheres to ethical, methodological, scholarly, and institutional quality standards.

The DEBESMSCAT Research Agenda Planning Committee therefore composed as a representative institutional body that brings together top management, research leadership, academic units, graduate education, extension, innovation, planning, quality assurance, finance and administration, faculty, students, and external stakeholders. Such composition ensures that the Research Agenda is not the product of a single office but a collective institutional commitment.

The proposed composition also reflects DEBESMSCAT's distinctive role as a higher education institution serving Masbate while aspiring toward national recognition and international engagement. The presence of disciplinary experts ensures academic rigor; research and planning personnel provide technical competence; administrators provide institutional and resource perspectives; extension and community representatives provide development relevance; innovation and knowledge-management personnel provide pathways for utilization; and external partners provide independent and user-oriented perspectives.

Accordingly, the Planning Committee becomes more than a drafting group. It serves as the institution's strategic research governance mechanism, responsible for connecting DEBESMSCAT's institutional mandate with the research needs of Masbate, the development priorities of the Bicol Region, national research and development imperatives, and emerging global challenges. Through this multidisciplinary and participatory structure, DEBESMSCAT can establish a Research Agenda that is academically credible, institutionally feasible, socially responsive, innovation-oriented, and strategically positioned to contribute to the transformation of Masbate and the advancement of Philippine higher education.

A.1.2 Utilization and/or Commercialization of Research Outputs

The Dr. Emilio B. Espinosa, Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT) recognizes that the value of research is realized not only through the completion of studies and the production of scholarly publications but, more importantly, through the utilization, adoption, transfer, dissemination, and commercialization of research outputs. Research becomes more meaningful when the knowledge, technologies, innovations, products, processes, policy recommendations, creative works, and community-based solutions generated by faculty members, students, researchers, and partner institutions are translated into tangible benefits for the College, industry, government, and communities.

Consistent with this principle, DEBESMSCAT implements a research utilization and commercialization process that connects research generation with innovation, intellectual property management, technology transfer, extension, production, community engagement, industry partnerships, and knowledge management. This approach is particularly appropriate to the College's mandate and development-oriented character because many of its research activities are intended to respond to the needs of Masbate and surrounding communities in agriculture, fisheries, education, technology, entrepreneurship, environmental sustainability, livelihood development, and other priority areas.

Research and Development Unit's Business Process Map

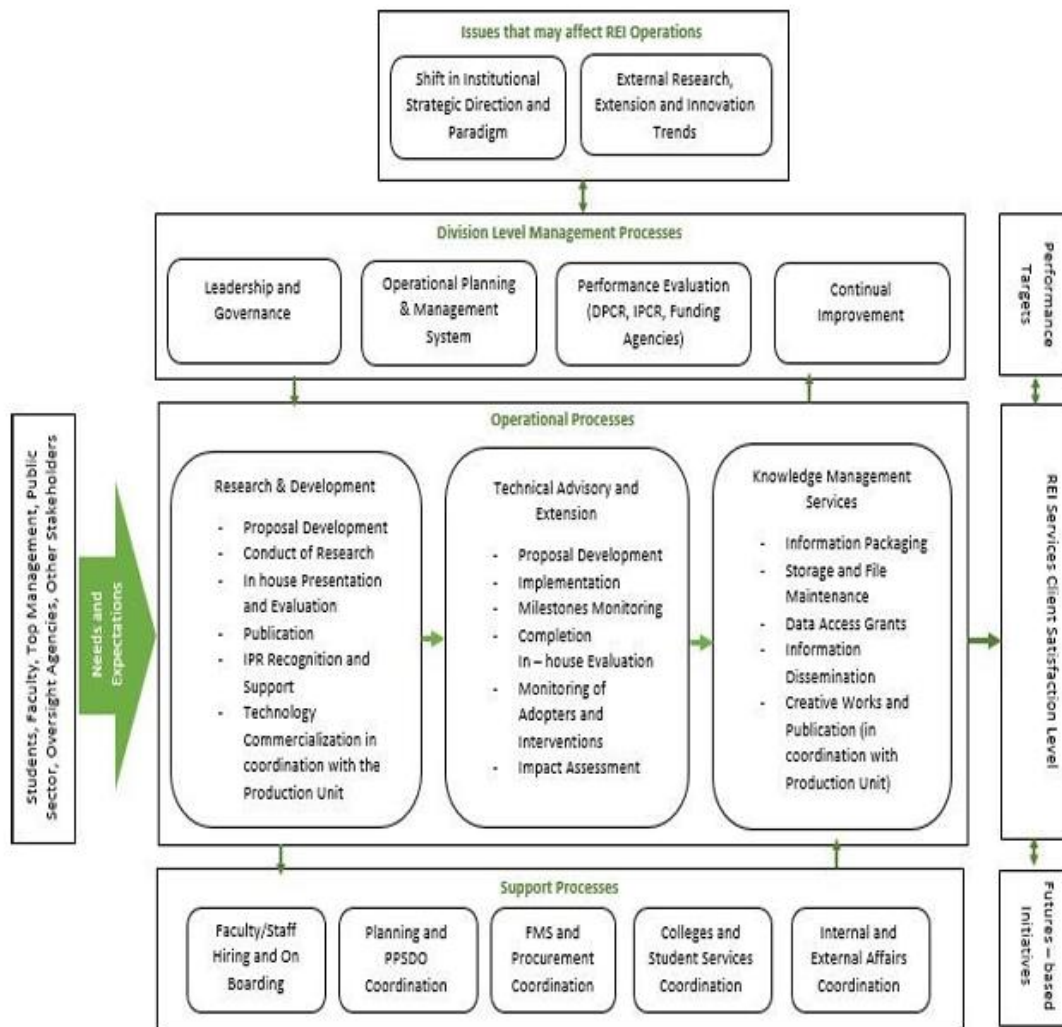
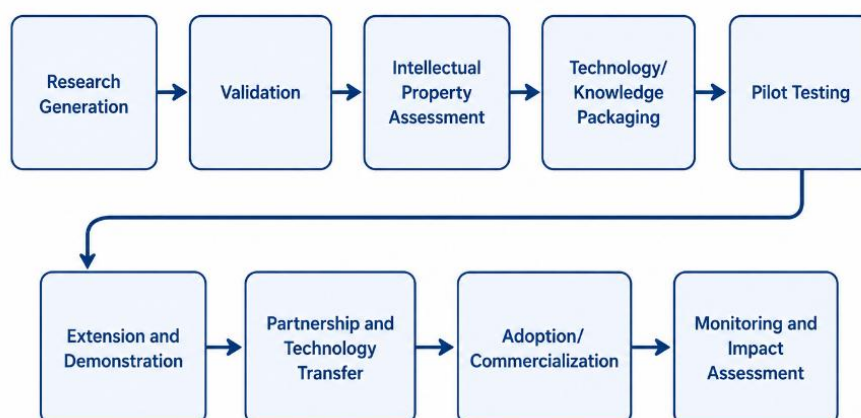


Figure 4. RDS Unit's Business Process Map

The institutional process may be viewed as a continuum:



Through this continuum, DEBESMSCAT seeks to ensure that research outputs move beyond academic documentation and reach their intended users.

1. Identification and Classification of Research Outputs

The utilization and commercialization process begins during the implementation and completion of research projects. Researchers are required to identify the potential outputs and possible users of their research. Outputs may include new knowledge, research-based models, technologies, prototypes, products, production processes, training modules, instructional materials, policy recommendations, databases, software, creative works, community-based innovations, and other intellectual outputs.

The Research and Development function, in coordination with the Office of the Vice President for Research, Development, Extension, Innovation, Creative Works and Knowledge Management, facilitates the documentation and classification of completed research outputs according to their potential use. The outputs may be classified as:

- a. Knowledge outputs: research findings, scholarly publications, policy briefs, technical reports, and databases;
- b. Technology outputs: prototypes, machines, devices, production technologies, laboratory methods, and digital technologies;
- c. Product outputs: food products, agricultural products, processing innovations, educational materials, and other marketable outputs;
- d. Process innovations: improved production, administrative, educational, or community-development processes;
- e. Policy outputs: recommendations, policy papers, institutional guidelines, and evidence-based frameworks;
- f. Training and extension outputs: manuals, modules, technology packages, demonstrations, and capacity-building programs; and
- g. Intellectual property outputs: inventions, utility models, industrial designs, trademarks, software, copyrighted materials, and other protectable works.

This classification allows the institution to determine the most appropriate pathway for utilization or commercialization.

2. Research Output Assessment and Validation





Before a research output is promoted for utilization or commercialization, it undergoes technical assessment and validation. The purpose is to determine whether the output is scientifically credible, technically feasible, useful to potential beneficiaries, economically viable, environmentally appropriate, and sufficiently mature for adoption.

For technology-based outputs, validation may involve laboratory testing, field trials, prototype development, demonstration activities, performance evaluation, user testing, and comparative assessment.

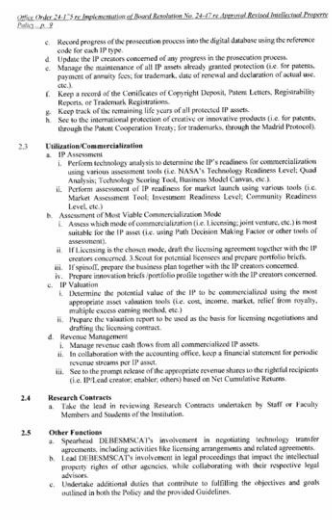
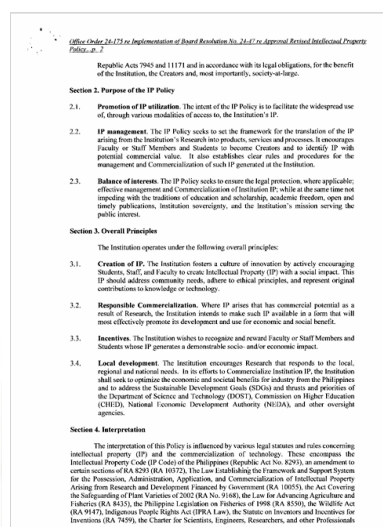
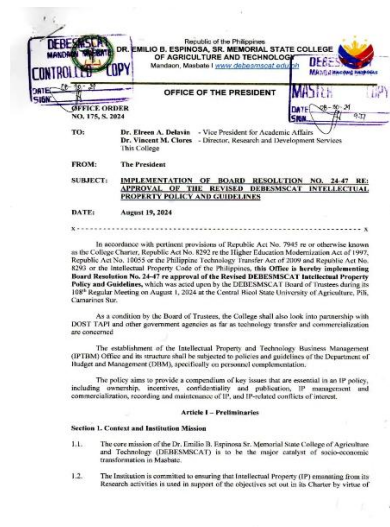
For community-based innovations, validation may involve consultation with intended beneficiaries and assessment of usability, affordability, cultural appropriateness, sustainability, and local applicability.

For policy-oriented research, validation focuses on the strength of evidence, relevance to the policy issue, feasibility of recommendations, and potential contribution to institutional or government decision-making.

This process helps ensure that only research outputs with demonstrated value are promoted for broader utilization.

3. Intellectual Property Identification and Protection

A critical component of commercialization is the identification and protection of intellectual property (IP). DEBESMSCAT recognizes that research outputs with commercial, technological, or creative potential require appropriate intellectual property protection before they are publicly disclosed or transferred to external parties.



The appropriate institutional unit evaluates potentially protectable outputs and determines the appropriate IP mechanism. Depending on the nature of the output, this may include copyright, patent, utility model, industrial design, trademark, or other applicable forms of protection.

Researchers are therefore encouraged to disclose potentially protectable research outputs before publication, public demonstration, or external commercialization. This helps protect the interests of researchers and the College while creating opportunities for technology transfer and commercialization.

Intellectual property management also promotes a culture in which researchers recognize that research outputs may possess value beyond publication. The process therefore connects scholarly productivity with innovation and knowledge-based enterprise.

4. Technology Packaging and Knowledge Translation

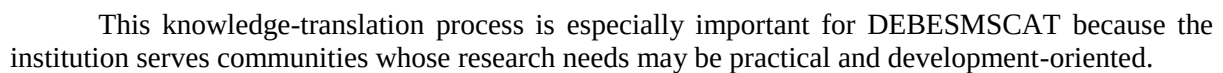
Research findings are not always readily usable by their intended beneficiaries. Consequently, DEBESMSCAT undertakes technology packaging and knowledge translation to convert technical research findings into accessible and usable forms.

Depending on the target users, outputs may be converted into:

- a. technology manuals;
- b. production guides;
- c. training modules;
- d. policy briefs;
- e. technical bulletins;
- f. instructional materials;
- g. demonstration protocols;
- h. videos and digital learning materials;
- i. business or enterprise models;
- j. technology packages;
- k. community extension materials; and
- l. simplified knowledge products.

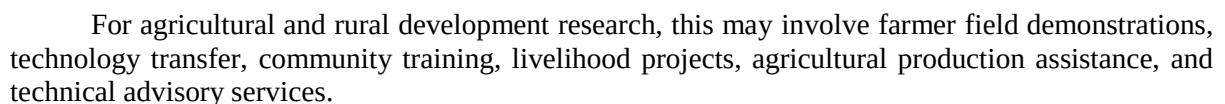
For example, an agricultural research project should not end with a technical research report. If the study generates a more productive farming technique, the result may be developed into a technology package, demonstrated in partner communities, evaluated by farmers, and subsequently adopted or commercialized.





One of the most important mechanisms through which DEBESMSCAT promotes research utilization is the integration of research outputs into extension programs.

A typical process is:



For business and entrepreneurship research, outputs may be translated into enterprise development programs, entrepreneurial training, business models, product development, or community livelihood initiatives.

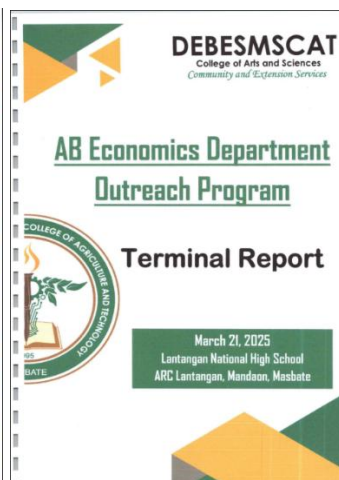
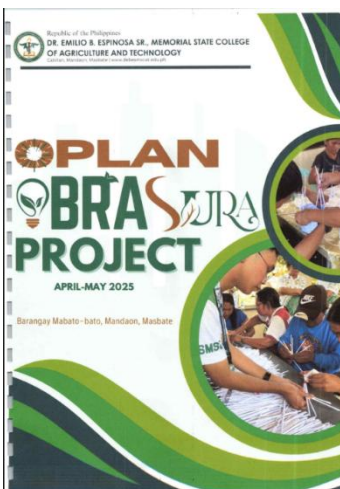
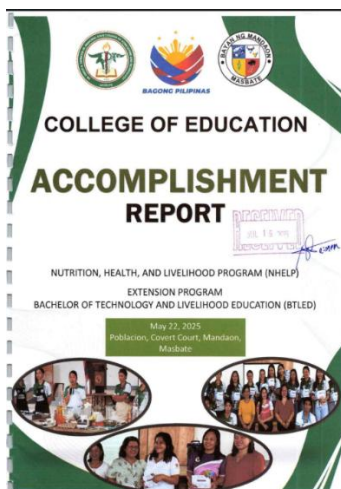
Through this mechanism, research findings become practical interventions rather than remaining solely within academic publications.

6. Community-Based Utilization

DEBESMSCAT's location and mandate make community-based utilization a particularly important component of the research utilization system. Research priorities are expected to address real concerns of communities in Masbate, and research outputs should therefore be returned to the communities in forms that they can understand and use.

Community utilization may involve:

- a. Technology demonstrations;
- b. Community training;
- c. Livelihood development;
- d. Agricultural and fisheries technology transfer;
- e. Environmental management initiatives;
- f. Educational interventions;
- g. Entrepreneurship development;
- h. Health and wellness initiatives;
- i. Disaster resilience programs;
- j. Digital literacy activities; and
- k. Participatory community development projects.



The institution can also use participatory approaches in which community members are involved in identifying problems, testing solutions, evaluating technologies, and determining whether an innovation is appropriate for local conditions.

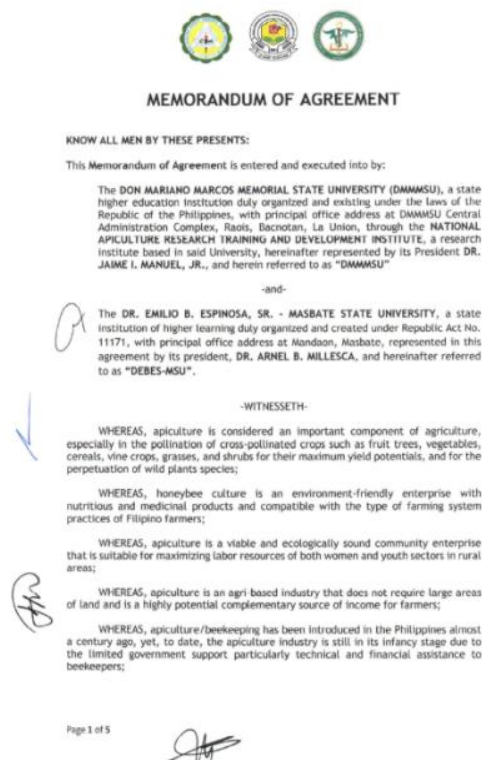
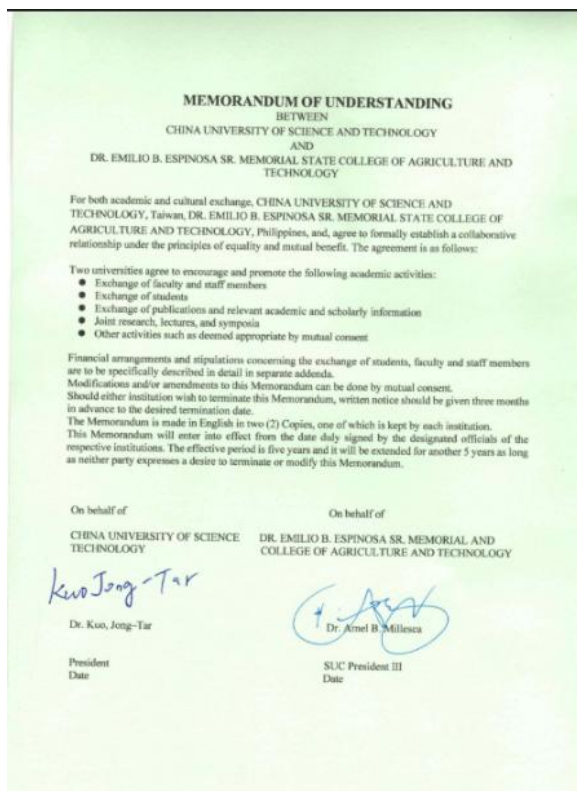
This creates a feedback loop in which beneficiaries do not merely receive research outputs but contribute to their improvement.

7. Industry and External Partnership

Commercialization requires engagement beyond the academic environment. DEBESMSCAT therefore promotes partnerships with government agencies, private enterprises, industries, local government units, cooperatives, non-government organizations, other higher education institutions, and research organizations.

Partnerships may provide:

- technical expertise;
- equipment and facilities;
- production sites;
- testing environments;
- market information;
- investment;
- distribution networks;
- commercialization expertise;
- technology transfer mechanisms; and



MEMORANDUM OF UNDERSTANDING
Between
OCCIDENTAL MINDORO STATE COLLEGE
AND
DR. EMILIO B. ESPINOSA SR. MEMORIAL STATE COLLEGE OF AGRICULTURE AND TECHNOLOGY

This Memorandum of Understanding (MOU) is a general enabling document for inter-institutional cooperation between **Occidental Mindoro State College** (hereafter referred to as OMSC) and **Dr. Emilio B. Espinosa Sr. Memorial State College of Agriculture and Technology** (hereafter referred to as DEBESMSCAT). Both parties/universities agree as follows:

ARTICLE I
OBJECTIVE(S)

The objective of this Memorandum of Understanding is to establish cooperation on enhancement of opportunities in higher education, strengthening scientific and technological developments and promotion of cross-border cooperation, and cultural awareness between, OMSC and DEBESMSCAT. In particular, this MOU shall establish exchange and collaboration in areas of interest and benefit to undergraduate programs of the parties allied with Agriculture and Research and Development.

ARTICLE 2
SCOPE OF ACTIVITIES

Academic cooperation will include, subject to the availability of funds and the framework of the regulations and administrative rules in force in the country:

1. Exchange of the faculty members and staff;
2. Exchange of undergraduate and graduate students;
3. Joint research activities;
4. Joint teaching programs;

MEMORANDUM OF AGREEMENT
Between
Dr. Emilio B. Espinosa Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT)
and
Schools Division of Masbate Province

This Memorandum of Agreement (MOA) is made and entered into by and between:

Dr. Emilio B. Espinosa Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT), a state college duly organized and existing under Philippine laws, with principal address at Cabitan, Mandaon, Masbate, represented herein by its President, **DR. ARNEL B. MILLESCA, SUC President III**, hereinafter referred to as the **"FIRST PARTY,"**

The Schools Division of Masbate Province, with principal office at Rodeo Road, Centro, Masbate City, represented herein by the Assistant Schools Division Superintendent/OSC Schools Division Superintendent, **MR. JOEL E. CAOLBOY**, hereinafter referred to as the **"SECOND PARTY."**

WITNESSETH

WHEREAS, the **FIRST PARTY**, through its Research and Development Services, intends to implement a province-wide research project titled **MaReSEARCH: Masbate Assessment of Research Teaching Competence**;

WHEREAS, the **SECOND PARTY** recognizes the importance of data-driven policies and educational development, and supports the conduct of MaReSEARCH Project to establish baseline data on teachers' competence in teaching research-related subjects;

WHEREAS, both **PARTIES** acknowledge that collaboration is essential for successful implementation, data collection, analysis, and utilization of findings to improve research instruction in the province;

NOW, THEREFORE, for and in consideration of the foregoing premises, the **PARTIES** hereby agree as follows:

ARTICLE I. GENERAL PURPOSE AND SCOPE OF PARTNERSHIP

1. The purpose of this partnership is to conduct a province-wide assessment of teachers' competence in teaching research subjects across all public and private schools in Masbate Province.
2. The scope of this partnership includes planning, instrument development, data collection, analysis, reporting, and dissemination of results.
3. The project shall cover all teachers currently handling research-related subjects across grade levels, including Junior High School, Senior High School, and specialized research programs.

The institution's international and external academic partnerships also provide opportunities for collaborative research and technology development. DEBESMSCAT's renewed academic partnership with Kansas State University, for example, demonstrates the institution's continuing effort to expand external academic collaboration.

Such partnerships can help move promising research outputs from institutional laboratories and pilot sites toward broader application.

8. Commercialization Assessment

Not every research output is suitable for commercialization. DEBESMSCAT therefore applies an assessment process to determine which outputs have realistic commercial potential.

Potential commercialization criteria include:

- a. Technical feasibility
- b. Market demand
- c. Economic viability
- d. Affordability
- e. Scalability
- f. Competitive advantage
- g. Intellectual property status
- h. Environmental sustainability
- i. Social acceptability
- j. Institutional capability

DEBESMSCAT
Mandana, Marikina City

OFFICE OF THE PRESIDENT

OFFICE ORDER
NO. 175, S. 2024

TO: Dr. Eireen A. Delavin - Vice President for Academic Affairs
Dr. Vincent M. Chaves - Director, Research and Development Services
This College

FROM: The President

SUBJECT: IMPLEMENTATION OF BOARD RESOLUTION NO. 24-47 RE: APPROVAL OF THE REVISED DEBESMSCAT INTELLECTUAL PROPERTY POLICY AND GUIDELINES

DATE: August 19, 2024

In accordance with pertinent provisions of Republic Act No. 7943 re or otherwise known as the College Charter, Republic Act No. 8292 re the Higher Education Modernization Act of 1997, Republic Act No. 10055 re the Philippine Technology Transfer Act of 2009 and Republic Act No. 8293 or the Intellectual Property Code of the Philippines, this Office is hereby implementing Board Resolution No. 24-47 re approval of the Revised DEBESMSCAT Intellectual Property Policy and Guidelines, which was acted upon by the DEBESMSCAT Board of Trustees during its 108th Regular Meeting on August 1, 2024 at the Central Bicol State University of Agriculture, Pili, Camarines Sur.

As a condition by the Board of Trustees, the College shall also look into partnership with DOST TAPI and other government agencies as far as technology transfer and commercialization are concerned.

The establishment of the Intellectual Property and Technology Business Management (IPTBM) Office and its structure shall be subjected to policies and guidelines of the Department of Budget and Management (DBM), specifically on personnel complementation.

The policy aims to provide a compendium of key issues that are essential in an IP policy, including ownership, incentives, confidentiality and publication, IP management and commercialization, recording and maintenance of IP, and IP-related conflicts of interest.

Article I – Preliminaries

Section 1. Context and Institution Mission

- 1.1. The core mission of the Dr. Emilio B. Espinosa Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT) is to be the major catalyst of socio-economic transformation in Marikina.
- 1.2. The Institution is committed to ensuring that Intellectual Property (IP) emanating from its Research activities is used in support of the objectives set out in its Charter by virtue of

Office Order 24-175 re Implementation of Board Resolution No. 24-47 re Approval Revised Intellectual Property Policy... p. 28

required to submit to IPTBM the presentation materials one (1) week before the presentation to examine if there are subject matters that are not allowed to be presented.

Article XIII – Commercialization of Intellectual Properties

Section 1: Endorsement of IP to the DEBESMSCAT Technology Transfer Office (TTO)

The DEBESMSCAT IPTBM office shall endorse applied and registered IPs with validated commercialization potential to the DEBESMSCAT Technology Transfer Office (TTO) of the Institution for Commercialization.

Section 2: Assistance to IPTBM

Creators of IP which has been applied and registered, and is selected for Commercialization by the Institution must provide IPTBM with all reasonable support in the assessment, protection (including preventing premature disclosure and execution of any documents including Deeds of Assignment and Deeds Attesting to Creatorship), and Commercialization of the IP.

Section 3: Commercialization of IP generated from research funded by the Institution and other government agencies

Commercialization of generated IP from the research funded by the Institution and government agencies shall be subject to existing laws requiring transparency and accountability, the COA Rules and Regulations and as required under Article IX, Section 20 of RA 10055, the Institution through its IP office and Technology Transfer Office or Business Affairs Office, shall be allowed to directly negotiate agreements for the Commercialization of IPs, provided that it shall follow existing laws and regulations. In the absence of skilled personnel in the Institution to handle Commercialization activities, the Institution shall seek the assistance of a Fairness Opinion Board (FOB) pursuant to the Implementing Rules and Regulations of the Technology Transfer Act of 2009 or RA 10055.

Section 4: Allowance of Establishing a Company or Spin-off firm for Commercialization of IP

The Institution shall allow its researchers to commercialize or pursue commercialization of the IP and/or IPRs generated from R&D funded by DEBESMSCAT and other government agencies by creating, owning, controlling, or managing a company or spin-off firm undertaking Commercialization, or accepting employment as an officer, employee, or consultant in a spin-off firm undertaking such Commercialization as stipulated in RA 10055 and Republic Act No. 8439 and related law and regulations.

Section 5: General Guidelines for Commercialization

- 1.1. Regardless of the mode of IP Commercialization, the transaction will be executed in a Technology Transfer Agreement which:
 - a. protects the interests of the Institution, its Staff or Faculty Members and Students;
 - b. retains rights for the Institution to use the IP for educational and research purposes;
 - c. assures that the IP will be utilized in a manner which will serve the public good;
 - d. assures that the IP will be developed and brought to the marketplace as useful goods and services; and
 - e. prohibits the "sleaving" or "mothballing" of the IP or its use in any illegal or unethical manner.

Research outputs that demonstrate strong potential may then be prioritized for prototype development, business modeling, technology transfer, licensing, spin-off opportunities, or partnership with industry.

9. Prototype Development and Pilot Testing

For technology-oriented research, DEBESMSCAT promotes the transition from research findings to prototypes and pilot applications.

The prototype development stage allows researchers to determine whether a research concept can function effectively outside the research environment. Pilot testing may be conducted within the College, partner communities, farms, schools, laboratories, enterprises, or other appropriate sites.

Feedback obtained during pilot testing is used to improve the technology before wider dissemination.

For example, an agricultural technology developed through DEBESMSCAT research may initially be tested on a demonstration farm. Performance, cost, user acceptability, productivity, environmental impact, and maintenance requirements can be assessed. Improvements can then be incorporated before the technology is transferred to farmers or commercial partners.

10. Technology Transfer and Licensing

Where a research output has established intellectual property and commercial potential, DEBESMSCAT may pursue appropriate technology-transfer arrangements with external partners.

Technology transfer may involve:

- a. licensing;
- b. research collaboration agreements;
- c. technology adoption agreements;
- d. commercialization partnerships;
- e. production agreements;

- f. joint ventures where legally and institutionally appropriate;
- g. spin-off or start-up arrangements; and
- h. other authorized forms of knowledge or technology transfer.

Such arrangements clearly define ownership, intellectual property rights, responsibilities, financial arrangements, benefit-sharing, confidentiality, quality control, and monitoring mechanisms.

The objective is to create a fair and sustainable system in which researchers, the institution, partners, and communities can benefit from the successful utilization of research outputs.

11. Integration with Innovation and Entrepreneurship

Research commercialization is strengthened when research is connected with innovation and entrepreneurship. DEBESMSCAT's research ecosystem can therefore encourage researchers and students to explore entrepreneurial opportunities arising from research outputs.

Potentially commercializable research may be transformed:



This pathway can support the development of student and faculty innovators, technology-based enterprises, community enterprises, and other knowledge-based ventures.

Research outputs may also be integrated into entrepreneurship education and innovation programs, allowing students to learn how knowledge can be transformed into products and services that respond to market and community needs.

12. Dissemination and Research Utilization

Dissemination is an essential stage of the utilization process. DEBESMSCAT promotes the communication of research outputs through scholarly and community-oriented channels.

These include:

- a. research conferences;
- b. institutional research fora;
- c. peer-reviewed publications;
- d. technical reports;
- e. policy briefs;
- f. institutional repositories;
- g. websites and digital platforms;
- h. extension publications;

- i. community demonstrations;
- j. training activities;
- k. technology exhibits;
- l. innovation fairs; and
- m. stakeholder consultations.



Different audiences require different dissemination approaches. Researchers therefore need to communicate technical findings to scholars while also presenting practical implications to farmers, entrepreneurs, teachers, government officials, community organizations, and other users.

The goal is not merely to disseminate information but to promote knowledge uptake and application.

13. Monitoring of Utilization and Commercialization

DEBESMSCAT maintains a research utilization and commercialization monitoring system that tracks what happens to research outputs after project completion.

Monitoring indicators include:

- a. Number of research outputs assessed for utilization;
- b. Number of technologies validated;
- c. Number of research outputs adopted by communities;
- d. Number of technologies transferred;
- e. Number of intellectual property applications;
- f. Number of intellectual property registrations or grants;
- g. Number of commercialization agreements;
- h. Number of external users or adopters;
- i. Number of extension programs based on research;
- j. Income generated from research-based products or technologies;
- k. Number of policy recommendations adopted;
- l. Number of institutions using research outputs;
- m. Number of beneficiaries reached; and
- n. Documented economic, social, educational, or environmental impacts.

The monitoring process distinguishes between output, utilization, and impact. A published research paper is an output. A government agency using the findings in program development represents utilization. Improved services, productivity, income, educational outcomes, or environmental conditions represent impact.

This distinction is essential for demonstrating the actual value of institutional research.

14. Feedback and Continuous Improvement

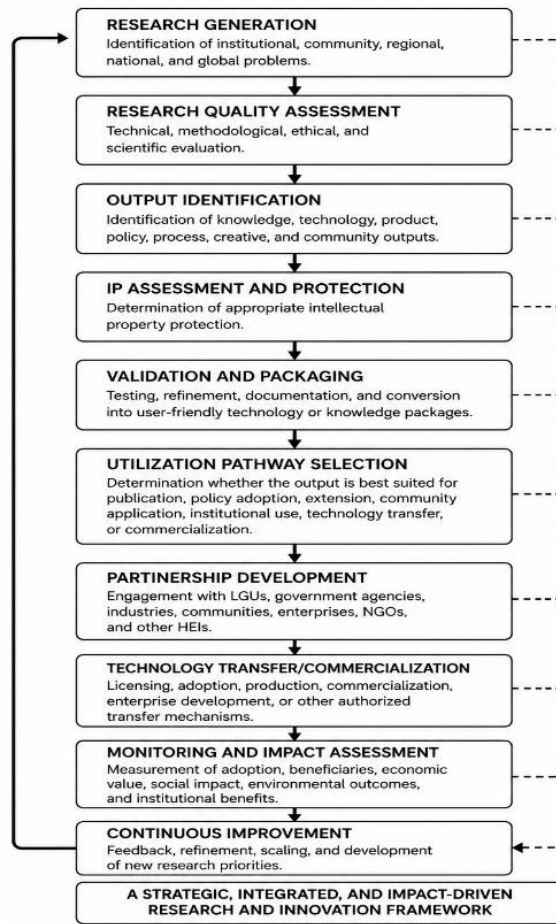
Research utilization and commercialization operate as a continuous improvement cycle. Feedback from users, communities, industries, and partner organizations should be returned to researchers and research managers.

This approach recognizes that successful research utilization is rarely a one-time event. Technologies may require modification, training materials may need updating, products may need redesign, and policy recommendations may need contextualization.

Feedback also informs future research priorities. If users encounter a problem while adopting a research output, that problem can become the subject of a subsequent research project.

15. Institutional Research Utilization and Commercialization Framework

In the context of DEBESMSCAT, the overall process can be summarized through the following institutional framework:



16. Governance and Accountability

To institutionalize this process, responsibility is shared across the research and innovation ecosystem. The Office of the Vice President for Research, Development, Extension, Innovation, Creative Works and Knowledge Management provides strategic oversight; the Research and Development Unit coordinates research outputs and utilization; the innovation and intellectual property function manages IP and technology-transfer concerns; extension units facilitate community adoption; academic units provide technical expertise; and the planning and quality assurance functions monitor institutional performance.

Researchers themselves remain central to the process. They are expected to identify potential users and applications at the proposal stage, document potential innovations, participate in validation and dissemination, and cooperate in technology transfer or utilization activities.

This distributed responsibility ensures that research utilization is embedded in the institutional research lifecycle rather than treated as an activity occurring only after research completion.

DEBESMSCAT's approach to research utilization and commercialization is anchored on the principle that research should create value beyond publication. The institution seeks to establish a continuous pathway through which research findings can be transformed into knowledge products, technologies, innovations, policies, services, extension interventions, community solutions, and commercially viable products.

The process begins with identifying research outputs and assessing their potential for use. It proceeds through validation, intellectual property assessment, technology and knowledge packaging, extension and demonstration, partnership development, technology transfer, commercialization, and impact monitoring. This integrated approach connects the institution's core functions of research, instruction, extension, innovation, production, creative works, and knowledge management.

For DEBESMSCAT, this process is especially significant because research is expected to contribute to the development and transformation of Masbate. Research on agriculture, education, technology, entrepreneurship, environmental sustainability, community development, and other priority areas can generate outputs that directly benefit local communities while contributing to national and international knowledge.

The ultimate objective is therefore not commercialization for its own sake. Commercialization represents only one pathway for realizing research value. Equally important are community adoption, policy utilization, institutional improvement, technology transfer, educational application, extension, social innovation, and environmental impact.

Through a systematic research utilization and commercialization mechanism, DEBESMSCAT can strengthen its research-to-impact ecosystem and demonstrate that research is an essential instrument for institutional excellence, innovation, community empowerment, and sustainable development. The success of the system should ultimately be measured by the extent to which research outputs are used, adopted, improved, transferred, scaled, and translated into meaningful benefits for the College and the communities it serves.

A.1.3 Linkages in Research

Linkages in Research

The Dr. Emilio B. Espinosa, Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT) recognizes research linkages as an essential component of institutional research development. Consistent with its mission to provide quality education, research, extension, and production and to establish partnerships with multi-sectoral local, national, and international institutions, the College actively develops and maintains relationships with government agencies, higher education institutions, research and development organizations, local government units, industry partners, private organizations, and international academic institutions. DEBESMSCAT's current institutional mission explicitly identifies partnerships with local, national, and international institutions for academic research, production, and community-based collaboration as a major institutional commitment.

The institution's research linkage strategy is designed to create opportunities for research funding, technical assistance, specialized expertise, access to facilities and equipment, research training, data sharing, technology transfer, joint publications, research commercialization, extension, and community-based research.

The establishment of linkages generally begins with the identification of potential partner institutions based on the priority areas in the DEBESMSCAT Research Agenda. The Research and Development Office, together with the Office of the Vice President for Research, Development, Extension, Innovation, Creative Works and Knowledge Management, academic units, and other concerned offices, identifies agencies whose mandates and technical expertise complement the research strengths and development priorities of the College.

Potential partnerships are then developed through exploratory meetings, technical consultations, benchmarking activities, conferences, research forums, networking activities, institutional visits, and formal communications. Where appropriate, these engagements are formalized through Memoranda of Understanding (MOUs), Memoranda of Agreement (MOAs), research contracts, project agreements, joint project proposals, or other appropriate partnership instruments.

DEBESMSCAT's participation in the Bicol Agriculture and Fisheries Resources, Research, and Extension Development Network (BAFRREDN), for example, demonstrates the use of a regional network approach to strengthen collaborative research and extension involving the Department of Agriculture, State Universities and Colleges, government agencies, and other partners.

Similarly, DEBESMSCAT's partnership with the Department of Science and Technology (DOST) through Project SARAI demonstrates how institutional linkages can provide access to specialized agricultural technologies, technical expertise, data systems, and science-based decision-support tools. The project involves DOST Region V, DEBESMSCAT, UPLB's Project SARAI, and participating local government units in Masbate, with applications involving GIS, remote sensing, crop monitoring, irrigation scheduling, pest management, and yield forecasting.

Research linkages are also used to strengthen institutional research capacity. The renewal of DEBESMSCAT's academic partnership with Kansas State University in March 2026, for instance, is expected to create opportunities for academic exchange, joint research initiatives, and professional development.

The College likewise develops partnerships with other higher education institutions. In April 2026, DEBESMSCAT and Bicol State College of Applied Sciences and Technology (BISCAST) formalized a strategic partnership involving joint initiatives in research, extension, and instruction designed to respond to emerging community and industry needs.

Through these mechanisms, DEBESMSCAT seeks to move from isolated research activities toward a networked research ecosystem in which institutional researchers have access to complementary expertise, facilities, data, funding opportunities, technologies, and research users.

Major Functions of Research Linkages

The institution's research linkages are intended to accomplish the following:

1. Access external research funding through competitive grants, commissioned research, and collaborative proposals;
2. Obtain technical assistance from government agencies, research institutions, laboratories, and technical experts;
3. Improve faculty research capability through training, mentoring, workshops, fellowships, and research exposure;
4. Strengthen research infrastructure through shared facilities, laboratories, equipment, databases, and technical resources;
5. Promote collaborative and interdisciplinary research involving multiple institutions and disciplines;
6. Facilitate research dissemination and publication through conferences, journals, research forums, and scholarly networks;
7. Accelerate technology transfer and commercialization by connecting researchers with innovation and industry partners;
8. Promote research utilization through extension programs, community partnerships, and government adoption;
9. Support internationalization through international academic and research collaboration; and
10. Strengthen the impact of research by connecting research outputs with actual users and development programs.

The linkage system is therefore not limited to obtaining funding. It is designed as a complete institutional mechanism for strengthening the research lifecycle—from problem identification and proposal development to implementation, dissemination, utilization, technology transfer, and impact assessment.

A.1.3.1 Government Linkages

DEBESMSCAT maintains linkages with government agencies whose mandates are directly relevant to the College's research, extension, innovation, agricultural development, education, science and technology, and community development priorities.

Government Research Linkage Matrix

Agency/Institution	Nature of Linkage	Assistance Provided
Department of Science and Technology – Region V (DOST V)	Research, science and technology collaboration; Project SARAI implementation	Technical expertise, agricultural decision-support technologies, GIS/remote sensing applications, crop monitoring, data-driven agricultural services, and technical coordination
DOST–Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCAARRD)	Research and innovation, agricultural R&D, technology transfer, RAISE-Bicol collaboration	Technical assistance, research and innovation development, intellectual property and technology business management support, commercialization and technology-transfer capacity building
Department of Agriculture – Regional Field Office V (DA RFO V)	Agricultural and fisheries research, extension, and development networking through BAFRREDN	Technical expertise, research and extension collaboration, agricultural and fisheries development coordination, access to sectoral programs and networks
Commission on Higher Education Regional Office V (CHEDRO V)	Higher education research, quality assurance, institutional development, and regional academic collaboration	Technical guidance on higher education standards, institutional development, research and academic policy alignment, and capacity-building opportunities
Local Government Units of Masbate	Community-based research, agricultural development, extension, technology adoption, and local development	Research sites, local data, beneficiary identification, community coordination, local implementation support, and technology adoption platforms
Department of Environment and Natural Resources (DENR) / relevant regional and provincial offices	Environmental and natural-resource research and community-based development	Technical information, environmental data, regulatory guidance, and potential research/extension collaboration
Department of Education (DepEd) / Schools Division Offices	Education research, teacher development, curriculum, school leadership, and community-based studies	Research sites, technical consultation, access to participating schools subject to applicable protocols, and

Agency/Institution	Nature of Linkage	Assistance Provided
		research utilization opportunities
Philippine Statistics Authority (PSA)	Research data and statistical information	Official demographic, economic, agricultural, social, and other statistical datasets
Other national government agencies and instrumentalities	Project-specific research, policy, technical, and community development collaboration	Data, technical assistance, research sites, training, subject expertise, and potential project funding

The government linkage portfolio is anchored on complementarity of mandates. The institution provides academic and research expertise, while government agencies contribute technical knowledge, policy direction, sectoral data, research facilities, program platforms, and access to intended beneficiaries.

A particularly significant current example is the DOST-DEBESMSCAT collaboration on Project SARAI. The project applies science-based technologies to agricultural decision-making in Masbate, illustrating how government research and development resources can be combined with DEBESMSCAT's academic and community presence.

Likewise, DEBESMSCAT's participation in BAFRREDN establishes a regional government-academe network for agricultural and fisheries research and extension.

The institution maintains documentary evidence for each linkage through signed MOAs/MOUs, project proposals, approved research agreements, terminal reports, accomplishment reports, certificates, minutes of meetings, training records, photographs, funding documents, and research outputs.

A.1.3.2 Private Linkages

DEBESMSCAT recognizes that private-sector and non-government linkages are necessary to complement government and academic partnerships. Private organizations can provide specialized technical expertise, market information, production facilities, investment opportunities, entrepreneurial support, commercialization pathways, and access to users and consumers.

Private/Non-Government Research Linkage Matrix

Agency/Institution	Nature of Linkage	Assistance Provided
Private industry partners relevant to DEBESMSCAT research programs	Industry-academe research and technology development	Technical expertise, field testing, product validation, market information, and potential commercialization
Agricultural enterprises and agribusiness organizations	Agricultural technology validation and enterprise development	Production sites, farmer networks, market feedback, technical inputs, and potential adoption
Private laboratories and technical service providers	Specialized testing and technical research support	Laboratory services, testing, calibration, technical analysis, and specialized expertise

Agency/Institution	Nature of Linkage	Assistance Provided
Private educational institutions	Research collaboration, faculty development, academic exchange, and joint research	Technical expertise, research mentoring, research participants, conferences, and publication opportunities
Non-government organizations and civil society organizations	Community-based research and development	Community access, beneficiary organization, field implementation, local knowledge, and social development expertise
Industry associations and professional organizations	Sectoral research and innovation collaboration	Industry information, technical expertise, professional networking, research dissemination, and potential users
International academic and research partners	International research collaboration and academic exchange	Research collaboration, expertise, professional development, international exposure, joint research opportunities, and potential co-publication

The private linkage strategy is particularly important for research areas with commercialization potential. Research outputs that demonstrate technical and social value may require private-sector partners to undertake market validation, product development, manufacturing, distribution, investment, or scaling.

The College's international linkage with Kansas State University also provides a significant example of the role of non-government academic partnerships. The renewed MOU in 2026 is expected to expand opportunities for joint research initiatives, academic exchange, and professional development.

DEBESMSCAT should continue expanding private-sector partnerships particularly in agriculture, food processing, agribusiness, digital technology, engineering, renewable energy, tourism, education technology, entrepreneurship, and other areas identified in its Research Agenda.

A.1.4 Collaborative Group/Joint Researches

Collaborative Group/Joint Researches

DEBESMSCAT promotes collaborative research as a strategic approach to increasing research quality, institutional capability, resource mobilization, and societal impact. The College recognizes that many contemporary development problems are complex and cannot be adequately addressed by a single researcher, discipline, or institution.

Accordingly, collaborative research is encouraged through institutional partnerships, joint research proposals, research networks, interdisciplinary teams, technical working groups, community-based research, and externally funded projects.

The process begins with the identification of a research problem aligned with the DEBESMSCAT Research Agenda. Researchers then identify potential institutional or external partners with complementary expertise, facilities, data, technology, research sites, or funding opportunities.

The proposed collaboration is evaluated in terms of:

- a. Relevance to institutional and partner priorities;
- b. Technical complementarity;
- c. Research expertise;
- d. Availability of facilities and resources;
- e. Funding requirements;
- f. Potential research outputs;
- g. Intellectual property implications;
- h. Publication arrangements;
- i. Ethical considerations;
- j. Technology-transfer potential; and
- k. Expected institutional and community impact.

Where collaboration is feasible, the participating institutions develop a joint concept note or proposal. Roles, responsibilities, resource contributions, intellectual property arrangements, authorship, data ownership, confidentiality, publication, financial management, and expected outputs are documented through an appropriate agreement.

The collaboration may then proceed through joint data collection, laboratory work, field experimentation, technology development, analysis, publication, dissemination, extension, or commercialization.

DEBESMSCAT's collaboration with BISCAT provides a current example. The two institutions formalized a strategic partnership in April 2026 involving joint initiatives in research, extension, and instruction to address emerging community and industry needs.

The DOST-DEBESMSCAT Project SARAI collaboration likewise illustrates a multi-institutional approach in which science and technology expertise, academic capacity, agricultural research, and local implementation are combined to address climate-resilient agriculture in Masbate.

Internationally, the renewed partnership with Kansas State University provides a platform for expanding joint research and professional development opportunities.

The College's research conference activities further support this collaborative environment. DEBESMSCAT's IRODEO platform brings together researchers, government agencies, academic institutions, and industry experts around research, innovation, and extension collaboration. The 2025 conference, for example, focused on strengthening inclusive research and extension collaborations for future-ready solutions.

A.1.4.1 Collaborating or Cooperating Agencies

The following agencies and institutions may be presented as DEBESMSCAT's collaborating/cooperating agencies, subject to attachment of the corresponding MOA, MOU, project agreement, or other documentary evidence.

Name of Collaborating/Cooperating Agency	Address	Nature of Collaboration/Cooperation
Department of Science and Technology Region V (DOST V)	Legazpi City, Albay	Science and technology research, Project SARAI, technical assistance, innovation, agricultural technology, and capacity building
DOST-PCAARRD	Los Baños, Laguna	Agricultural, aquatic and natural resources research; innovation; intellectual property and technology business management; technology transfer and commercialization
Department of Agriculture Regional Field Office V (DA RFO V)	Pili, Camarines Sur	Agricultural and fisheries research, extension, development networking, and BAFRREDN
Commission on Higher Education Regional Office V (CHEDRO V)	Legazpi City, Albay	Higher education development, research policy, academic quality assurance, institutional development, and regional collaboration
Bicol State College of Applied Sciences and Technology (BISCAST)	Naga City, Camarines Sur	Joint research, extension, instruction, academic collaboration, and innovation-driven agriculture
University of the Philippines Los Baños / Project SARAI	Los Baños, Laguna	Science-based agricultural technologies, climate-smart agriculture, GIS, remote sensing, agricultural monitoring, and decision support
Kansas State University	Manhattan, Kansas, USA	International academic cooperation, joint research opportunities, academic exchange, and professional development
Participating Local Government Units in Masbate	Province of Masbate	Community-based research, technology demonstration, local implementation, data access, and beneficiary engagement
Bicol SUCs and participating academic institutions	Bicol Region	Collaborative research, research dissemination, technical expertise, faculty

Name of Collaborating/Cooperating Agency	Address	Nature of Collaboration/Cooperation
		development, and joint academic activities
Industry and community partners	Various locations	Technology validation, research utilization, community application, enterprise development, and potential commercialization

A.1.5 Patents and Intellectual Property Rights

Mechanism Adopted by DEBESMSCAT for the Implementation of Intellectual Property Law

DEBESMSCAT recognizes intellectual property (IP) protection as an essential component of its research, innovation, creative works, technology-transfer, and commercialization system. The institution implements an intellectual property management mechanism that is anchored on Philippine intellectual property laws, particularly Republic Act No. 8293, or the Intellectual Property Code of the Philippines, as amended, and related legislation and regulations governing technology transfer and commercialization. The Intellectual Property Office of the Philippines identifies RA 8293 as the principal Intellectual Property Code and recognizes the legal framework covering patents, utility models, industrial designs, trademarks, copyright, and technology transfer.

DEBESMSCAT has established an institutional Intellectual Property and Technology Business Management (IPTBM) function to strengthen the management, protection, transfer, and commercialization of research and innovation outputs. The College's current RAISE-Bicol engagement with DOST-PCAARRD specifically includes a project for strengthening IPTBM operations, harmonizing IP policies, mentoring technology-transfer officers, intensifying external linkages, and supporting the regional IPTBM network.

The institutional commitment to IP management is also evident in the College's graduate research orientation activities, where the DEBESMSCAT Intellectual Property Policy is discussed with graduate students as part of research orientation.

1. Institutional IP Policy

DEBESMSCAT implements an institutional IP policy that provides guidance on the ownership, protection, management, disclosure, utilization, and commercialization of intellectual property generated through institutional research and other scholarly activities.

Existing DEBESMSCAT documentation indicates that the College requires a statement concerning its policy on patents, copyrights, and other intellectual property to be included in research proposals and contracts/agreements, unless an exception has been approved by the Board of Trustees.

This requirement ensures that IP concerns are considered at the beginning of the research process, rather than only after an innovation has already been publicly disclosed.

2. IP Awareness and Capacity Building

DEBESMSCAT promotes IP awareness among faculty members, researchers, students, and other personnel through orientations, seminars, training programs, research conferences, graduate student orientations, and technology-transfer activities.

The objective is to enable researchers to recognize potentially protectable outputs before publication or public disclosure.

Training may cover:

- a. fundamentals of intellectual property;
- b. patent searching;
- c. prior-art searching;
- d. patentability;
- e. utility models;
- f. industrial designs;
- g. trademarks;
- h. copyright;
- i. technology disclosure;
- j. IP ownership;
- k. inventor and author rights;
- l. licensing;
- m. technology transfer;
- n. commercialization; and
- o. research publication and disclosure considerations.

The institutional IPTBM function provides a focal point for these activities.

3. Research Output Disclosure

Researchers are encouraged to disclose potentially protectable intellectual property to the appropriate institutional IP/technology-transfer office before making public disclosures that could affect protection.

The disclosure process enables the institution to determine whether the research output is potentially protectable and which form of protection is appropriate.

Potential outputs may include:

- a. inventions;
- b. agricultural technologies;
- c. machines and devices;
- d. production processes;
- e. software and digital applications;
- f. databases;
- g. educational materials;
- h. designs;

- i. trademarks;
- j. creative works;
- k. research-based products; and
- l. other innovations.

The IP assessment considers the nature of the output, ownership, inventorship/authorship, novelty or other applicable legal requirements, potential commercial value, funding sources, and contractual obligations.

4. IP Evaluation and Protection

After disclosure, the institutional IPTBM/IP function conducts or facilitates an initial assessment of the appropriate protection strategy.

Depending on the nature of the output, the institute may pursue:

- a. Patent protection for qualifying inventions;
- b. Utility model protection for appropriate technical innovations;
- c. Industrial design protection for eligible designs;
- d. Trademark protection for distinctive signs associated with products or services;
- e. Copyright protection for literary, artistic, educational, software, and other copyrightable works; and
- f. Other appropriate forms of protection or contractual mechanisms where applicable.

The College coordinates with the Intellectual Property Office of the Philippines and/or qualified IP professionals when external filing, prosecution, registration, legal interpretation, or specialized assistance is required.

The Philippine IP framework expressly recognizes these categories of intellectual property and includes technology transfer within the applicable legal framework.

5. Ownership and Rights Management

DEBESMSCAT's IP mechanism also addresses ownership and rights among researchers, faculty members, students, the institution, external partners, and funding agencies.

Research agreements should therefore specify:

- a. Ownership of research outputs;
- b. Inventorship/authorship;
- c. Institutional and researcher rights;
- d. Obligations of external partners;
- e. Confidentiality;
- f. Publication rights;
- g. Licensing rights;
- h. Revenue or benefit-sharing arrangements;
- i. Commercialization responsibilities; and
- j. Dispute-resolution mechanisms.

This is especially important for collaborative research where several institutions contribute funding, facilities, personnel, data, or technical expertise.

6. Technology Transfer and Commercialization

IP protection is not treated as an end in itself. DEBESMSCAT connects IP management with technology transfer and commercialization.

This is demonstrated by the institution's participation in the **RAISE-Bicol Program**, particularly Project 7/Project 1F for strengthening the IPTBM. The project is intended to enhance DEBESMSCAT's ability to commercialize research and innovations and includes strengthening IPTBM operations, policy harmonization, technology-transfer officer mentoring, institutional linkages, and regional networking.

The College's participation in DOST's Program PROPEL also reflects its engagement with a national innovation environment designed to bridge research and successful commercialization through mentorship, capacity building, legal and IP support, facilities, investor connections, and financial support mechanisms.

The commercialization pathway may therefore be represented as:

Research → IP Disclosure → IP Assessment → Protection → Prototype/Validation → Market Assessment → Technology Packaging → Licensing/Partnership → Commercialization → Monitoring and Benefit Sharing.

7. Intellectual Property Valuation and Market Assessment

For outputs with commercial potential, DEBESMSCAT should assess technical feasibility, market demand, economic value, scalability, competing technologies, production costs, potential users, and intellectual property strength.

Where appropriate, the College may seek technical and business assistance from DOST-PCAARRD, IPOPHL, partner HEIs, industry partners, technology business management professionals, and other qualified organizations.

The objective is to ensure that commercialization decisions are based on evidence rather than simply on the existence of a patent or research output.

8. Technology Transfer and Licensing

Where an output is ready for transfer, DEBESMSCAT may explore appropriate mechanisms such as:

- a. Licensing;
- b. Technology adoption agreements;
- c. Research and development agreements;
- d. Industry partnerships;
- e. Commercialization agreements;
- f. Joint ventures where legally authorized;
- g. Start-up or spin-off arrangements where appropriate; and
- h. Other lawful technology-transfer mechanisms.

The Philippine technology-transfer framework includes RA 10055, the Philippine Technology Transfer Act of 2009, alongside the Intellectual Property Code and associated implementing rules and

guidelines. IPOPHL identifies these laws and regulations as part of the national technology-transfer framework.

9. Research Contracts and IP Clauses

DEBESMSCAT integrates IP provisions into research proposals, contracts, MOAs, MOUs, and other research agreements.

The purpose is to establish IP ownership and responsibilities before research activities begin.

This is particularly important in externally funded and collaborative research because ownership and commercialization rights may depend on the source of funding, institutional contributions, contractual provisions, and applicable government policies.

The inclusion of the DEBESMSCAT IP policy statement in research proposals and contracts is therefore an important institutional control mechanism.

10. IP Database and Documentation

The College should maintain an institutional database or registry of intellectual property generated by its researchers and students.

The database should contain, where applicable:

- a. Title of invention/innovation;
- b. Name of researcher/inventor/author;
- c. Academic or administrative unit;
- d. Date of disclosure;
- e. Type of ip;
- f. Filing date;
- g. Application number;
- h. Registration/grant number;
- i. Ownership;
- j. Funding source;
- k. Partner institution;
- l. Commercialization status;
- m. Licensing status;
- n. Income generated;
- o. Beneficiaries/users; and
- p. Current status.

This database supports institutional monitoring and provides evidence for accreditation, planning, research evaluation, and universityhood requirements.

11. Monitoring and Impact Assessment

IP management does not end with registration. DEBESMSCAT monitors whether protected outputs are being utilized, transferred, adopted, or commercialized.

Performance indicators include:

- a. Number of IP disclosures;
- b. Number of patent applications;
- c. Number of patents granted;
- d. Number of utility model applications/registrations;
- e. Number of industrial design applications/registrations;
- f. Number of copyright registrations;
- g. Number of trademark applications/registrations;
- h. Number of technologies protected;
- i. Number of technologies transferred;
- j. Number of licensing agreements;
- k. Number of commercialization agreements;
- l. Income generated;
- m. Number of technology adopters;
- n. Number of community beneficiaries;
- o. Number of start-ups/spin-offs supported; and
- p. Documented social, economic, educational, or environmental impact.

These indicators allow the institution to determine whether IP activities are contributing to the broader objective of research utilization and innovation.

Integrated Institutional Framework for A.1.3–A.1.5

The three areas: research linkages, collaborative research, and intellectual property—should not be implemented as separate activities. They form an integrated institutional research and innovation ecosystem.

The DEBESMSCAT framework may be represented as follows:





This integrated framework is consistent with DEBESMSCAT's institutional direction toward research, extension, innovation, creative works, knowledge management, and multi-sectoral partnerships. The institution's current RAISE-Bicol IPTBM initiative is particularly significant because it explicitly connects research and innovation with intellectual property, technology transfer, commercialization, institutional policy, and external partnerships.

A.1.5.1 List of Copyrights and Patents

(Present data on research outputs, inventions and creative work with patents and copyrights.)

Name of Output/Invention Creative work	Category	Specific use /Purpose	Researchers/ Inventors	Date Registered	Patent Number

A.2 Research Capacity

A.2.1 Research Budget

A.2.1.1 Budget from the Institution

A.2.1.1 Budget from the Institution

Budget from the Institution

The Dr. Emilio B. Espinosa, Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT) recognizes institutional funding as the primary foundation for sustaining its research and development program. As a state higher education institution, DEBESMSCAT develops its internal research budget through the regular institutional planning and budgeting process, ensuring that research

is treated as an integral component of the College's core functions rather than as an activity dependent solely on external grants.

The institutional approach is anchored on the principle that research funding should be planned, programmed, appropriated, implemented, monitored, and evaluated as part of the College's regular strategic and operational priorities. This provides a degree of continuity and predictability that allows the Research and Development Office and academic units to implement approved research projects, support researchers, maintain research infrastructure, conduct dissemination activities, and develop innovations even when external funding opportunities are limited.

The College's current institutional framework places research alongside instruction, extension, production, innovation, and other strategic functions. Its Board of Trustees-approved Strategic Development Plan 2026–2030 provides the overall direction for institutional development and reinforces the College's commitment to strengthening instruction, research, extension, and production.

1. Institutional Sources of Research Budget

DEBESMSCAT's institutional research budget is primarily developed from its annual appropriations and other authorized institutional resources. As a government higher education institution, its principal funding base is the **General Appropriations Act (GAA)**, complemented, where authorized and available, by other institutional income and special budgetary allocations.

The College's annual budget preparation follows the government planning and budgeting cycle. Research priorities are translated into programs, projects, and activities (PPAs), which are costed and incorporated into the appropriate institutional planning and budget documents.

The institution's FY 2026 operational planning process demonstrates this approach. During the 2026 Operational Planning and GAD Budgeting Workshop, DEBESMSCAT reviewed its institutional priorities, research and extension thrusts, and financial framework. The Financial Management Services presented the budget distribution per unit covering the 2026 National Expenditure Program (NEP), Special Budget, and Other Income, while the Research and Development Office presented the institution's research agenda and priorities.

This process demonstrates that research funding is incorporated into the broader institutional budget framework rather than developed independently from the College's financial planning.

For FY 2027, DEBESMSCAT likewise continued this integrated planning approach. Its 2027 Operational Planning and GAD Budgeting activity included identification of priority PPAs and presentation of the proposed budget covering **GAA/Special Budget and internally generated income**, demonstrating the institution's continuing effort to connect program priorities with available financial resources.

2. Research Budget as Part of the Institutional Planning Cycle

The preparation of the research budget begins with the identification of institutional research priorities. These priorities are derived from the DEBESMSCAT Research Agenda, institutional strategic directions, academic program needs, regional and national development priorities, and emerging research and innovation opportunities.

The process involves:

Research Agenda → Priority Research Programs → Annual PPAs → Project Costing → Budget Proposal → Institutional Review → Budget Approval → Fund Release → Research Implementation → Financial and Physical Monitoring → Evaluation.

The Research and Development Office identifies the resources required to implement approved research programs. These may include:

- a. Research grants and project funding;
- b. Research materials and supplies;
- c. Laboratory and field expenses;
- d. Equipment and instrumentation;
- e. Data collection and processing;
- f. Statistical and technical services;
- g. Research capability-building activities;
- h. Publication and dissemination;
- i. Research conferences and fora;
- j. Intellectual property registration;
- k. Technology development and validation;
- l. Community-based research activities; and
- m. Research monitoring and evaluation.

The proposed requirements are consolidated and subjected to institutional review, prioritization, and budget programming.

This approach ensures that research funding is directly connected to planned outputs and expected outcomes.

3. Integration with the Annual Operational Planning Process

A significant strength of DEBESMSCAT's internal funding mechanism is the integration of budget preparation with operational planning.

During the FY 2026 planning workshop, offices and units were required to develop their respective Operational Plans, Project Procurement Management Plans, Projects, Receipts and Expenditure Plans, and GAD Plans. Research and extension priorities were explicitly incorporated into the process.

This means that research units are expected to identify their activities and resource requirements in advance. Budget requests are consequently linked to specific PPAs rather than being treated as generalized funding requests.

The process promotes:

Planning → Costing → Prioritization → Budgeting → Procurement → Implementation → Monitoring

Such integration improves the likelihood that approved research projects will have the necessary financial and logistical support for implementation.

4. Institutional Prioritization of Research Funding

Because institutional resources are finite, DEBESMSCAT applies prioritization in allocating its internal research budget. Priority is given to research proposals and programs that demonstrate strong alignment with:

1. the DEBESMSCAT Research Agenda;
2. the institutional strategic development plan;
3. the mission and core values of the College;
4. academic program priorities;

5. Masbate and Bicol development needs;
6. national research and development priorities;
7. emerging global challenges;
8. institutional quality assurance requirements;
9. innovation and technology-transfer opportunities; and
10. potential community and societal impact.

Additional consideration may be given to research projects with potential for external funding, intellectual property generation, commercialization, policy adoption, extension utilization, or significant community impact.

This prioritization mechanism enables DEBESMSCAT to maximize limited institutional resources by directing funds toward research that can produce strategic value.

5. Regular Institutional Appropriations as the Foundation of Stability

The stability of the internal research budget is strengthened by embedding research within the College's regular budgetary and planning mechanisms. Instead of relying exclusively on external grants, DEBESMSCAT maintains an institutional funding base through its approved annual budget.

The College's transparency portal demonstrates that DEBESMSCAT maintains formal annual financial reporting mechanisms, including Statements of Allotment, Obligation and Balances, disbursement reports, income reports, physical plans and reports, and Budget and Financial Accountability Reports for multiple fiscal years, including FY 2026 and previous years.

This system provides a mechanism for tracking the availability, obligation, utilization, and balance of institutional resources.

For research, such financial documentation provides evidence that allocated resources are subject to government financial management and accountability requirements.

6. Multi-Year Strategic Planning for Research Investment

Internal research funding is also supported by multi-year institutional planning. DEBESMSCAT's Strategic Development Plan 2026–2030 provides a medium-term framework for institutional priorities and development. The College formally launched this new institutional framework in January 2026 following Board of Trustees approval.

A multi-year framework allows research investment to move beyond one-year project cycles. Major research infrastructure, laboratories, research centers, technology platforms, data systems, and capacity-building initiatives often require several years to develop.

Consequently, the Research and Development Office can identify investments that require sustained institutional support and advocate for their inclusion in successive annual budgets.

Examples include:

- a. Establishment or enhancement of research laboratories;
- b. Acquisition of specialized equipment;
- c. Development of research centers;
- d. Research information systems;
- e. Intellectual property and technology-transfer infrastructure;
- f. Research databases;

- g. Faculty research capability development;
- h. Research publication support; and
- i. Innovation and technology-development facilities.

7. Special Budgetary Allocations

In addition to the regular institutional budget, DEBESMSCAT may obtain special budgetary support for strategic research and development initiatives.

A current example is the ₱2 million allocation under the 2026 General Appropriations Act for DEBESMSCAT's Futures Thinking initiatives. The funding supports implementation of the institution's Strategic Roadmap Towards Sustainable Development, Innovation and Futures Thinking 2025–2029 and its 2026 phase of Program Expansion and Early Impact.

This illustrates how the institution can supplement its regular research resources through targeted government appropriations for strategic initiatives.

Another example is the DEBESMSCAT IPTBM strengthening initiative under RAISE-Bicol, which has an approved two-year budget of **₱2.35 million** for strengthening intellectual property and technology business management operations, policy harmonization, technology-transfer officer mentoring, institutional linkages, and regional IPTBM networking.

These initiatives demonstrate the institution's capacity to mobilize special resources for research-related priorities beyond its routine operating requirements.

8. Complementing Internal Funding with External Resources

Although this criterion focuses on institutional budget, DEBESMSCAT's approach recognizes that internal funding should serve as a **stable base for leveraging external resources**.

Institutional funding can support the preparation of proposals, preliminary studies, counterpart contributions, researcher training, pilot activities, data gathering, prototype development, and other activities that make research teams more competitive for external grants.

The strategy may therefore be expressed as:

Internal Funding → Research Capacity → Pilot/Preliminary Research → Competitive Proposal → External Grant → Expanded Research Program → Research Output/Impact

This approach reduces dependence on external funding while using internal resources strategically to attract larger investments.

The institution's participation in national research and innovation initiatives illustrates this leveraging approach. For example, its engagement with DOST and other partners has generated opportunities for technical assistance, specialized technologies, and project resources that complement institutional capabilities.

9. Other Institutional Income

Where legally authorized and consistent with government budgeting, accounting, auditing, and financial management regulations, DEBESMSCAT may also use available institutional income to complement its research budget.

The 2026 operational planning process explicitly included **Other Income** alongside the National Expenditure Program and Special Budget in the institutional budget framework.

Potential institutional resources may support research-related activities when they are properly programmed, authorized, and aligned with the approved institutional plans and applicable government regulations.

Such resources may be used to supplement areas where GAA funding is insufficient, particularly for activities requiring flexible operational support.

10. Linking Budget with Procurement Planning

Research funding stability depends not only on the availability of funds but also on the institution's capacity to procure the materials, equipment, services, and facilities required for research.

DEBESMSCAT therefore integrates research requirements into its procurement planning process through the preparation of Project Procurement Management Plans (PPMPs), Annual Procurement Plans (APPs), and related procurement documents.

The College's FY 2026 planning process specifically included PPMP and Purchase Request presentations as part of institutional financial and operational planning.

The institution's procurement records also demonstrate continuing investment in scientific and technical equipment. Its procurement postings include an invitation to bid for scientific and technical equipment, indicating institutional investment in resources that support technical and research-related activities.

The institution's 2026 Board-approved procurement activities likewise included a ₱7.8-million contract for tools and equipment for the College of Industrial Technology, strengthening laboratory instruction and industry-aligned technical capabilities.

These investments contribute indirectly to research capacity because laboratories, technical equipment, fabrication facilities, and specialized tools provide infrastructure for applied research and innovation.

11. Investment in Research Infrastructure

A stable research budget is not limited to direct research grants. DEBESMSCAT recognizes that sustainable research requires infrastructure investment.

Institutional resources may therefore support:

- a. Laboratories;
- b. Research equipment;
- c. Fabrication facilities;
- d. Agricultural demonstration areas;
- e. Information technology infrastructure;
- f. Research libraries and databases;
- g. Research management systems;
- h. Innovation laboratories;
- i. Intellectual property facilities; and
- j. Research and extension facilities.

The partnership between DEBESMSCAT and the Department of Trade and Industry (DTI) for the enhancement of the College's Fabrication Laboratory is a significant example of this broader research-capacity strategy. The partnership generated ₱4.7 million in funding for the enhancement of

the Fab Lab, including advanced laboratory equipment and machinery that strengthen research and innovation capabilities.

Although this particular investment involved an external government partner, it demonstrates the complementary relationship between institutional commitment and external resource mobilization.

12. Maintaining Financial Stability Through Monitoring and Accountability

DEBESMSCAT maintains the stability and credibility of its internal research budget through regular financial monitoring, physical accomplishment reporting, procurement monitoring, and accountability mechanisms.

The institution conducts periodic accomplishment reporting and agency reviews in which financial and physical performance are assessed. In its 2025 second-quarter accomplishment reporting, the Financial Management Services presented institutional fund utilization and expenditure performance, while Procurement Management Services reported on ongoing and completed procurement activities.

For research, this means that financial resources are monitored alongside physical and research accomplishments.

The monitoring process should answer:

- a. How much research funding was allocated?
- b. How much has been obligated?
- c. How much has been disbursed?
- d. What research outputs have been generated?
- e. What projects are on schedule?
- f. What projects require adjustment?
- g. What balances remain?
- h. What resource requirements should be included in the succeeding budget cycle?

This creates an accountability loop between funding and performance.

13. Performance-Based Budgeting and Research Accountability

The stability of internal research funding is further strengthened when the institution can demonstrate that research investments generate measurable results.

DEBESMSCAT should therefore link budget allocation with research performance indicators such as:

- a. Number of approved research projects;
- b. Percentage of funded projects completed;
- c. Number of research publications;
- d. Number of completed theses/dissertations supported;
- e. Number of externally funded projects leveraged;
- f. Number of technologies developed;
- g. Number of intellectual property applications;
- h. Number of technologies utilized or commercialized;
- i. Number of research partnerships;

- j. Number of community beneficiaries;
- k. Number of policy recommendations generated;
- l. Research income generated; and
- m. Documented research impact.

This approach provides management with evidence for determining whether internal research investments should be maintained, increased, redirected, or expanded.

14. Internal Budget as Counterpart Funding

Institutional research funding also functions as counterpart support for collaborative and externally funded research.

In competitive grant applications, DEBESMSCAT may need to provide counterpart resources such as:

- a. Personnel time;
- b. Research facilities;
- c. Laboratory access;
- d. Equipment;
- e. Transportation;
- f. Field sites;
- g. Administrative support;
- h. Data;
- i. Counterpart cash, where required; and
- j. Other in-kind contributions.

Maintaining an internal research allocation therefore increases the College's ability to participate in larger research consortia and externally funded projects.

This is particularly important in establishing partnerships with DOST, DA, CHED, other SUCs, international universities, industries, and research organizations.

15. Protecting the Continuity of Research Funding

To maintain stability, DEBESMSCAT should institutionalize several financial strategies.

a. Multi-year research programming

Major research programs should be programmed over several years where appropriate, allowing the College to anticipate future funding requirements.

b. Annual budget integration

Research priorities should be reflected consistently in annual operational plans, PPAs, PPMPs, and budget proposals.

c. Priority-based allocation

Resources should be concentrated on research areas with high institutional relevance, research quality, innovation potential, and societal impact.

d. External fund leveraging

Internal resources should be strategically used to attract larger external grants and partnerships.

e. Research infrastructure investment

The institution should maintain a continuing program for upgrading laboratories, equipment, information systems, and research facilities.

f. Financial monitoring

Budget utilization should be reviewed regularly to identify implementation constraints and improve succeeding budget cycles.

g. Performance-based justification

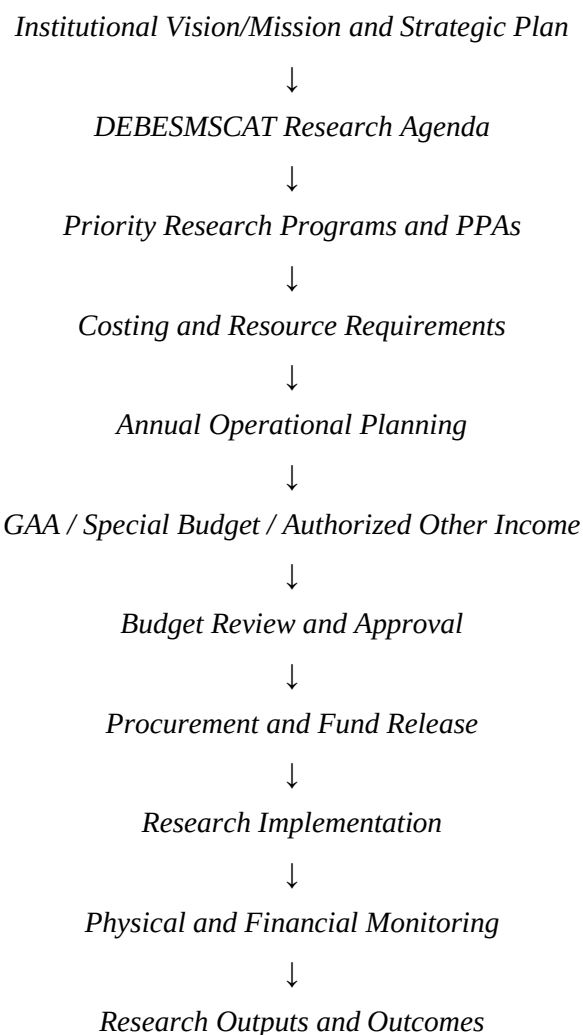
Research units should demonstrate outputs and outcomes as a basis for continued or increased institutional support.

h. Institutional policy support

Research funding mechanisms should be supported by clear policies concerning proposal evaluation, fund release, allowable expenses, project monitoring, liquidation, output submission, and research incentives.

16. Research Budget Stability Framework

The DEBESMSCAT approach may be summarized through the following framework:





Performance Evaluation



Evidence-Based Budget Adjustment for the Next Cycle

This creates a continuous system in which research funding is connected with institutional planning and performance.

17. Evidence of Institutional Commitment

DEBESMSCAT's recent institutional activities provide evidence of continuing commitment to research-related financial support.

First, the College's 2026 operational planning explicitly integrated research and extension thrusts into the institutional planning and budgeting process, with financial requirements considered under the NEP, Special Budget, and Other Income framework.

Second, the institution has secured targeted GAA support for its Futures Thinking research-related initiatives, demonstrating its capacity to obtain special appropriations for strategic research and innovation priorities.

Third, DEBESMSCAT has continued to invest in technical and scientific infrastructure, including procurement of scientific and technical equipment and the development of fabrication and laboratory capabilities.

Fourth, the College's financial transparency system provides multi-year records of allotments, obligations, balances, disbursements, income, physical plans, and financial accountability reports.

Together, these mechanisms demonstrate that research funding is incorporated into a broader institutional system of planning, budgeting, procurement, implementation, monitoring, and accountability.

DEBESMSCAT sources and maintains its internal research budget through an institutionalized planning and budgeting system anchored on the General Appropriations Act, approved institutional budgets, special budgetary allocations, and authorized other institutional income. Research priorities are translated into annual programs, projects, and activities and incorporated into the College's operational and financial planning processes.

The stability of the research budget is strengthened by the integration of the Research Agenda with the Strategic Development Plan, annual operational planning, budget preparation, procurement planning, financial management, and performance monitoring. The College's FY 2026 and FY 2027 planning processes demonstrate this institutional approach, with research priorities incorporated into broader financial and operational planning.

The institution also uses internal resources strategically to build research capacity, develop infrastructure, support researchers, prepare competitive proposals, and leverage external funding. Special government allocations, such as the ₱2 million 2026 GAA support for Futures Thinking, further demonstrate the ability to supplement regular resources for strategic research and innovation initiatives.

Most importantly, DEBESMSCAT's internal research budget is treated as an investment rather than merely an expenditure. Funding is intended to generate research outputs, strengthen faculty and student research capability, develop technologies and innovations, support intellectual property generation, inform institutional and public policy, strengthen extension services, and contribute to the transformation of Masbate.

A.2.1.2 Budget from Other Sources

Budget from Other Sources

The Dr. Emilio B. Espinosa, Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT) recognizes that a sustainable research and innovation ecosystem requires the strategic mobilization of resources beyond the institution's regular internal budget. Accordingly, the College has established an external resource mobilization mechanism through which research proposals, innovation projects, technology-development initiatives, capacity-building activities, and research infrastructure requirements are matched with appropriate government agencies, research councils, development institutions, higher education institutions, private-sector organizations, and international partners.

The external funding mechanism is anchored on the DEBESMSCAT Research Agenda and Strategic Development Plan. Research priorities are translated into fundable programs and projects and matched with the mandates and funding windows of external agencies. The approach is therefore not simply to seek funding whenever an opportunity becomes available, but to strategically align research priorities with external funding opportunities.

1. Major External Sources of Research and Research-Related Funding

DEBESMSCAT's external research and innovation resources may come from the following major sources:

1. National government agencies and departments;
2. Science and technology funding agencies;
3. Agriculture and fisheries research agencies;
4. Commission on Higher Education programs;
5. Local government units;
6. Other state universities and colleges;
7. International universities and research institutions;
8. Private industry and business organizations;
9. Non-government organizations and development partners;
10. Competitive research and innovation programs; and
11. Special government appropriations for strategic institutional initiatives.

The College's external funding strategy is particularly focused on agencies whose mandates correspond with its priority areas in agriculture, fisheries, education, engineering, technology, environmental sustainability, innovation, futures thinking, community development, and intellectual property.

2. Department of Science and Technology and its Councils

The Department of Science and Technology (DOST) and its sectoral councils represent important sources of technical assistance, research support, innovation resources, equipment, capability development, and technology-transfer opportunities for DEBESMSCAT.

The College actively develops relationships with DOST and its relevant councils to access programs that support research and innovation. These linkages provide opportunities for project funding, technical assistance, specialized expertise, research facilities, intellectual property support, technology development, and commercialization.

One significant example is DEBESMSCAT's engagement with the RAISE-Bicol Program, particularly the project strengthening its Intellectual Property and Technology Business Management (IPTBM) operations. The initiative has an approved two-year budget of ₱2,350,000.00. The project supports the strengthening of IPTBM operations, harmonization of IP policies, mentoring of technology-transfer officers, external linkages, and the regional IPTBM network.

This demonstrates how DEBESMSCAT mobilizes external resources not only for conventional research projects but also for the institutional infrastructure necessary to protect, transfer, and commercialize research outputs.

3. DTI Support for Research and Innovation Infrastructure

The Department of Trade and Industry (DTI) represents another significant external source of research- and innovation-related resources.

In 2025, DEBESMSCAT formalized an agreement with DTI for the enhancement of the College's Fabrication Laboratory (Fab Lab). The project provided ₱4.7 million in funding for the enhancement of the facility, including advanced laboratory equipment and machinery intended to strengthen technical education, research, innovation, and hands-on development capabilities.

The DTI-supported Fab Lab demonstrates an important dimension of the College's external resource mobilization strategy: research funding may take the form of equipment, facilities, infrastructure, technical assistance, and technology platforms, rather than direct research grants alone.

The additional equipment subsequently delivered through the project includes advanced machinery such as a high-production UV printer, strengthening the capacity of local entrepreneurs and the College community to connect digital design with physical production.

This type of external investment creates long-term institutional research capacity because the facilities can support multiple research projects, innovation activities, student projects, technology development initiatives, and community-based applications.

4. General Appropriations Act and Special External Appropriations

Another important source of external research-related funding is special government appropriations under the General Appropriations Act (GAA).

A current example is DEBESMSCAT's ₱2 million GAA allocation for 2026 to advance its Futures Thinking initiatives. The funding supports the implementation of the College's Strategic Roadmap Towards Sustainable Development, Innovation and Futures Thinking 2025–2029, particularly the phase focused on program expansion and early impact.

Although this allocation is provided through government appropriations, it is treated separately from the College's regular internal research budget because it represents targeted external government support secured for a specific strategic initiative.

The funding illustrates the College's capacity to identify an emerging institutional priority, develop a strategic program, advocate for appropriate support, and secure dedicated government resources.

5. Agriculture and Fisheries Research Funding

Given DEBESMSCAT's agricultural and technological mandate, agriculture and fisheries agencies represent strategic sources of external research resources.

The College develops linkages with the Department of Agriculture, DOST-PCAARRD, and related agencies to support research involving:

- a. Agricultural productivity;

- b. Climate-smart agriculture;
- c. Fisheries;
- d. Livestock;
- e. Food security;
- f. Agricultural biotechnology;
- g. Post-harvest technologies;
- h. Value-chain development;
- i. Natural resource management;
- j. Agricultural mechanization;
- k. Digital agriculture;
- l. Remote sensing and gis;
- m. Rural enterprise development; and
- n. Community-based agricultural innovation.

The College's collaboration with DOST and Project SARAI demonstrates how external technical and institutional resources can be brought together to strengthen agricultural research and decision-support systems in Masbate.

Such partnerships may provide combinations of research funding, equipment, technical expertise, data, field sites, training, software, technology platforms, and access to beneficiaries.

6. Competitive Research Grant Mechanism

DEBESMSCAT promotes competitive research funding as an important mechanism for diversifying its research resource base.

Under this mechanism, faculty researchers and research teams identify funding calls from government agencies, research councils, international organizations, foundations, industry partners, and other institutions. The Research and Development Office disseminates relevant calls and assists researchers in determining their alignment with the institutional Research Agenda.

The typical process is:

Funding Call → Eligibility Assessment → Research Concept → Technical Review → Proposal Development → Institutional Endorsement → External Submission → Evaluation → Award → Implementation

- a. The College's technical review mechanism may examine:
- b. Alignment with the DEBESMSCAT Research Agenda;
- c. Significance of the research problem;
- d. Research methodology;
- e. Qualifications of the research team;
- f. Expected outputs and outcomes;
- g. Feasibility;
- h. Budget justification;
- i. Innovation potential;
- j. Intellectual property implications;

- k. Sustainability;
- l. Community impact; and
- m. Potential for utilization or commercialization.

This process improves the competitiveness and quality of proposals submitted to external funding agencies.

7. Proposal Development as the Core Outsourcing Mechanism

The principal mechanism used by DEBESMSCAT to obtain external research resources is proactive proposal development.

Instead of waiting for external institutions to identify the College as a beneficiary, the institution develops research concepts based on its priority areas and matches them with appropriate funding programs.

This requires continuous monitoring of:

- a. Government research calls;
- b. Dost and research council funding windows;
- c. Da research programs;
- d. Ched research programs;
- e. International research grants;
- f. Development assistance programs;
- g. Industry research requirements;
- h. Innovation challenges;
- i. Technology-transfer programs;
- j. Climate and sustainability funds; and
- k. Other competitive opportunities.

The Research and Development Office serves as the institutional clearinghouse for disseminating opportunities, coordinating proposal preparation, facilitating technical review, and monitoring submissions.

8. Institutional Counterpart and Leveraging Strategy

DEBESMSCAT's internal resources are also used strategically as counterpart contributions to external projects.

Counterpart support may include:

- a. Faculty time;
- b. Research facilities;
- c. Laboratory space;
- d. Equipment;
- e. Field stations;
- f. Administrative services;

- g. Data;
- h. Technical personnel;
- i. Transportation;
- j. Institutional counterpart funds; and
- k. Other in-kind resources.

This approach allows the College to leverage relatively limited internal resources to attract larger external investments.

The mechanism can be represented as:

Internal Institutional Support + Research Expertise + External Funding Opportunity = Expanded Research Capacity.

This is particularly important for projects requiring significant equipment, specialized laboratories, field implementation, or multi-institutional collaboration.

9. External Technical Assistance as a Form of Research Support

DEBESMSCAT recognizes that external assistance does not always take the form of cash.

Technical assistance can have substantial financial-equivalent value because it provides access to expertise, facilities, technologies, and services that would otherwise require significant institutional expenditure.

External technical assistance may include:

- a. Expert consultancy;
- b. Specialized laboratory testing;
- c. Research methodology training;
- d. Statistical assistance;
- e. Gis and remote sensing technology;
- f. Scientific equipment;
- g. Technical mentoring;
- h. Intellectual property assistance;
- i. Technology business management;
- j. Commercialization mentoring;
- k. Research management training;
- l. Access to specialized databases; and
- m. Research fellowship opportunities.

The DOST-supported RAISE-Bicol IPTBM initiative is a strong example because the support combines financial resources with mentoring, policy harmonization, technology-transfer capacity development, and external networking.

10. International Sources and Partnerships

International academic partnerships provide another avenue for accessing research expertise, collaborative opportunities, professional development, and potential research funding.

DEBESMSCAT's renewed partnership with **Kansas State University** provides a platform for academic exchange, joint research opportunities, and professional development. Such partnerships may eventually facilitate collaborative proposals to international funding agencies and research networks.

Internationalization is therefore treated not only as an academic exchange mechanism but also as a potential research resource-mobilization strategy.

The institution's participation in international research conferences and its continuing engagement with international academic partners strengthen its visibility and provide opportunities to develop relationships that can mature into funded collaborative research.

11. Collaboration with Other Higher Education Institutions

DEBESMSCAT also leverages partnerships with other state universities, colleges, and higher education institutions.

The 2026 strategic partnership between DEBESMSCAT and Bicol State College of Applied Sciences and Technology (BISCAST), for example, covers joint initiatives in research, extension, and instruction designed to respond to emerging community and industry needs.

Such partnerships can strengthen external resource mobilization by allowing institutions to jointly submit proposals, pool expertise, share facilities, conduct multi-site studies, and develop larger interdisciplinary research programs.

Collaborative proposals are often more competitive because they demonstrate:

- a. complementary expertise;
- b. broader research coverage;
- c. stronger research infrastructure;
- d. access to multiple research sites;
- e. wider beneficiary reach; and
- f. greater potential for scaling.

12. Industry and Private-Sector Resource Mobilization

Private-sector partnerships provide opportunities for commissioned research, product development, technology validation, equipment support, technical services, and commercialization.

DEBESMSCAT can engage industries through:

- a. Commissioned research;
- b. Industry-sponsored research;
- c. Joint product development;
- d. Technology validation;
- e. Testing and laboratory services;
- f. Research consultancy;
- g. Innovation challenges;
- h. Equipment donations;
- i. Research scholarships;
- j. Internship-linked research;
- k. Commercialization agreements; and

l. Technology licensing.

These arrangements are particularly relevant to agriculture, food processing, engineering, manufacturing, information technology, entrepreneurship, tourism, and other applied disciplines.

The College's Fab Lab partnership with DTI provides an example of how government-industry-development priorities can converge to strengthen institutional innovation infrastructure.

13. Local Government Units as Resource and Implementation Partners

Local government units are another important external resource because they can provide research sites, local data, community access, technical personnel, logistical support, and in some cases financial or material counterpart resources.

For DEBESMSCAT, LGU partnerships are particularly important for community-based research in Masbate.

LGUs can support projects involving:

- a. Agriculture;
- b. Fisheries;
- c. Disaster resilience;
- d. Environmental management;
- e. Education;
- f. Tourism;
- g. Livelihood;
- h. Public administration;
- i. Digital transformation;
- j. Community development; and
- k. Social innovation.

The College's approach is to connect research proposals with actual local development programs, allowing research outputs to be immediately tested, demonstrated, or adopted in communities.

14. International and Development-Partner Funding

The College may also pursue international development funding for research addressing global concerns such as:

- a. Climate change;
- b. Sustainable agriculture;
- c. Food security;
- d. Poverty reduction;
- e. Gender and inclusion;
- f. Digital transformation;
- g. Disaster resilience;
- h. Education;

- i. Biodiversity;
- j. Sustainable tourism; and
- k. Community development.

The institutional Futures Thinking initiative is particularly compatible with international development priorities because it addresses sustainability, innovation, foresight, and future-oriented governance.

DEBESMSCAT's Futures Thinking Office has participated in national and international-facing discussions concerning future work, education, health, agriculture and food security, technology, and tourism, providing a basis for developing future collaborative proposals.

15. External Funding Identification and Matching System

To institutionalize outsourcing of research funds, DEBESMSCAT should maintain an External Research Funding Opportunity Database.

The database should record:

Information	Description
Funding Agency	Government, private, international, or development institution
Funding Program	Name of grant/funding window
Priority Areas	Eligible research themes
Funding Ceiling	Maximum or indicative amount
Eligibility	Eligible institutions/researchers
Deadline	Submission deadline
Counterpart Requirement	Required institutional contribution
Required Outputs	Expected research/innovation outputs
Potential DEBESMSCAT Lead	Appropriate research team/unit
Status	For monitoring proposal development

This database allows the Research Office to systematically match DEBESMSCAT research priorities with available external resources.

16. Research Proposal Development and Quality Control

Before external submission, proposals should undergo institutional quality control.

The review involve the:

- a. Research and Development Office;
- b. Concerned academic department;
- c. Dean or academic head;
- d. Office of the Vice President for Research;
- e. Planning and Development Office;

- f. Finance and budget personnel;
- g. Intellectual Property and Technology Business Management Office, when applicable; and
- h. Other technical experts.

The review ensures that proposals are technically sound, financially realistic, legally compliant, ethically appropriate, and aligned with institutional priorities.

Where external funding requires institutional counterpart support, the appropriate administrative and financial offices should certify the availability or proposed source of such counterpart resources.

17. Grant Management and Accountability

Once funding is awarded, DEBESMSCAT formalizes the arrangement through an appropriate grant agreement, MOA, contract, or project document.

The agreement should specify:

- a. Funding amount;
- b. Project duration;
- c. Project objectives;
- d. Research team;
- e. Budget categories;
- f. Fund-release schedule;
- g. Allowable expenditures;
- h. Procurement requirements;
- i. Expected outputs;
- j. Reporting requirements;
- k. Intellectual property provisions;
- l. Publication rights;
- m. Ownership of equipment;
- n. Technology-transfer arrangements;
- o. Monitoring mechanisms; and
- p. Liquidation and audit requirements.

The Project Leader is responsible for technical implementation, while designated institutional offices ensure financial management, procurement, accounting, auditing, and reporting requirements.

This protects both the College and the funding agency and strengthens DEBESMSCAT's credibility as a research partner.

18. Monitoring External Research Funds

The institution monitors both the financial and physical performance of externally funded projects.

Monitoring indicators include:

- a. Amount of external funding secured;
- b. Number of proposals submitted;

- c. Proposal success rate;
- d. Number of externally funded projects;
- e. Percentage of projects completed;
- f. Fund utilization rate;
- g. Research outputs produced;
- h. Publications;
- i. Intellectual property generated;
- j. Technologies developed;
- k. Technologies transferred;
- l. Community beneficiaries;
- m. Policy outputs;
- n. Commercialization outcomes; and
- o. External partnerships established.

The monitoring results should feed into the succeeding research planning and funding strategy.

19. External Research Funding Matrix

The following matrix presents documented external or externally sourced research-related support that can be cited in the DEBESMSCAT accreditation portfolio. Amounts should be validated against the final MOA, award notice, project document, or financial records before being treated as audited institutional receipts.

External Source	Program/Project	Nature of Assistance	Amount of Assistance
General Appropriations Act / National Government	Futures Thinking Initiatives	Strategic research/futures-thinking program support	₱2,000,000.00
DOST/PCAARRD – RAISE-Bicol	IPTBM Strengthening Project / Project 7 (Project 1F)	IPTBM operations, IP policy harmonization, technology-transfer mentoring, external linkages, regional IPTBM network	₱2,350,000.00 over two years
Department of Trade and Industry (DTI)	DEBESMSCAT Fab Lab Enhancement	Advanced laboratory equipment and machinery; research and innovation infrastructure	₱4,700,000.00
DOST / Project SARAI partners	Project SARAI in Masbate	Technical/scientific assistance, agricultural decision-support technologies, GIS/remote sensing, crop monitoring and related support	Amount to be entered from project MOA/award document

Department of Agriculture / BAFRREDN	Agriculture and Fisheries Research and Extension Collaboration	Technical assistance, networking, research/extension support and sectoral collaboration	Amount to be entered from project agreement, where applicable
Kansas State University	Academic/Research Partnership	Joint research opportunities, academic exchange, professional development and technical collaboration	No direct cash amount publicly verified; enter project-specific amount where applicable
BISCAST	Joint Research, Extension and Instruction Partnership	Institutional collaboration, joint research and innovation activities	Project-specific amount to be entered from MOA/project documents
Local Government Units	Community-based Research/Extension Projects	Research sites, local data, community access, logistical/technical support and possible counterpart assistance	Project-specific amount to be entered from MOA/project records

The first three amounts provide a documented minimum of ₱9.05 million in externally sourced research, innovation, futures-thinking, and research-capacity-related support, based on publicly reported DEBESMSCAT figures. This total should not automatically be reported as cash research income, because the support includes different forms of assistance, including infrastructure and program support. The final accreditation figure should therefore be reconciled with official accounting and project records.

20. External Funding Performance Indicators

To demonstrate the effectiveness of its external resource mobilization mechanism, DEBESMSCAT should monitor the following indicators annually:

Indicator	Suggested Measure
External research funding secured	Total peso value per year
Number of external funding proposals submitted	Count
Number of approved external proposals	Count
External proposal success rate	Approved/submitted × 100
Number of funding agencies engaged	Count
Number of active externally funded projects	Count
Number of international funding partners	Count
Number of government funding partners	Count
Number of industry-funded projects	Count

Indicator	Suggested Measure
Research infrastructure support secured	Peso value
Technical assistance received	Number/value of interventions
External counterpart funding leveraged	Peso value
Research outputs from external grants	Count
Publications from external grants	Count
IP generated	Count
Technologies developed/transferred	Count
Commercialization outcomes	Number/value
Community beneficiaries	Number
External funding leveraged per peso of institutional support	Ratio

These indicators provide evidence that DEBESMSCAT's external resource mobilization efforts are becoming systematic and results-oriented.

21. Sustainability of External Resource Mobilization

DEBESMSCAT recognizes that external research funding is competitive and cannot substitute for stable institutional support. Consequently, the College uses external resources to complement rather than replace its internal research budget.

The sustainability strategy has three dimensions.

First, the College maintains a stable institutional research base that enables researchers to develop preliminary studies, proposals, partnerships, and counterpart contributions.

Second, the College continuously expands its external funding network so that dependence on any single agency is minimized.

Third, successful projects are used as platforms for subsequent funding. A completed project that demonstrates measurable outcomes becomes evidence for larger proposals, replication projects, scale-up initiatives, commercialization, and community adoption.

The mechanism is therefore:

Seed Funding → Proof of Concept → External Grant → Expanded Research → Research Output → Utilization/Commercialization → Impact → Follow-on Funding

DEBESMSCAT's mechanism for sourcing research funding from other sources is anchored on strategic resource mobilization, competitive proposal development, institutional partnerships, external technical assistance, and research-to-impact programming. The College identifies external funding opportunities that correspond to its Research Agenda and matches these opportunities with faculty expertise, institutional facilities, community needs, and strategic priorities.

Documented examples demonstrate that this mechanism is already generating substantial external support. The College has secured ₱2 million under the 2026 GAA for Futures Thinking initiatives, ₱2.35 million through the RAISE-Bicol IPTBM strengthening initiative, and ₱4.7 million from DTI for the enhancement of its Fabrication Laboratory, representing at least ₱9.05 million in publicly documented external or externally sourced research, innovation, futures-thinking, and research-capacity-related support.

More importantly, the institution's strategy goes beyond obtaining financial resources. External partnerships provide technical expertise, specialized equipment, research facilities, data, training, mentoring, technology platforms, field sites, intellectual property assistance, commercialization support, and opportunities for joint research.

The institution's continued participation in DOST and PCAARRD programs, DTI-supported innovation infrastructure, agricultural research networks, international academic partnerships, and collaborations with other higher education institutions demonstrates the development of a diversified research-resource ecosystem.

For accreditation purposes, the narrative should be supported by MOAs/MOUs, grant agreements, award notices, approved proposals, project budgets, Notice of Award documents, financial reports, procurement records, equipment acceptance documents, accomplishment reports, research outputs, and certificates of technical assistance. The official accounting records should be used to reconcile the amounts reported in the final accreditation submission.

Ultimately, DEBESMSCAT's external funding mechanism should be viewed as a research investment-leveraging system: institutional resources provide the foundation, external partners provide additional financial and technical capacity, collaborative research generates knowledge and innovation, and the resulting outputs are translated into utilization, commercialization, extension, policy, and community impact. This mechanism strengthens the College's ability to sustain a competitive, innovative, community-responsive, and future-oriented research program.

A.2.1.3 Describe the process on how:

A.2.1.3.1 The research budget of the institution is prepared and sourced out.

A.2.1.3.2 The research budget is appropriated to the different research units.

A.2.1.3.3 The research budget is allocated to its support mechanisms

Expenditure Item	Amount Allocated from the Budget	Alternative Funding Source/s (Amount)
1.Training and Capability Building	100,000	
2.Acquisition / Purchase of Equipment		
3.Repair / Improvement of Facilities		
4. Supplies and Materials	260,000	
5. Travel and Fuel Cost	234,000	
6. Researchers' Incentives	1,000,000	
7. Contingency Expenses		
8. Others (Please specify)	258,000	

A.2.2 Environment of Research

A.2.2 Environment of Research

The Dr. Emilio B. Espinosa, Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT) recognizes that a productive research program depends not only on funding, policies, and research facilities but also on the existence of an institutional **research culture** that encourages inquiry, innovation, collaboration, ethical scholarship, knowledge sharing, and research utilization. Accordingly, DEBESMSCAT is progressively developing an environment in which research is treated as a core institutional function and an integral component of instruction, extension, innovation, production, community engagement, and institutional development.

The College's research environment is anchored on its institutional mission, Research Agenda, strategic development framework, research policies, organizational structure, research funding mechanisms, faculty and student capability-building programs, research linkages, intellectual property mechanisms, research dissemination activities, and research infrastructure. The institutional direction is further strengthened by the **2026–2030 Strategic Development Plan**, which positions research, extension, innovation, production, internationalization, and partnerships as interconnected drivers of institutional development.

For DEBESMSCAT, the development of a research culture is particularly important because of its distinctive mandate as an agriculture- and technology-oriented state higher education institution serving Masbate. The College's research environment therefore encourages research that is relevant to local and regional development while meeting national and international standards of scholarship.

The institutional research environment may be characterized as:

Research Policy → Research Leadership → Capacity Building → Funding → Infrastructure → Collaboration → Research Implementation → Dissemination → Utilization/Innovation → Impact → Continuous Improvement.

1. Research as a Core Institutional Function

DEBESMSCAT establishes its research environment by recognizing research as one of its fundamental institutional functions alongside instruction, extension, production, innovation, creative works, and knowledge management.

This institutional positioning is important because a genuine research culture cannot develop when research is treated as an additional or peripheral responsibility. Research must be embedded in organizational priorities, workload arrangements, performance expectations, resource allocation, academic planning, and institutional decision-making.

The Office of the Vice President for Research, Development, Extension, Innovation, Creative Works and Knowledge Management provides institutional leadership for this function. The research structure provides mechanisms for planning, funding, monitoring, dissemination, research partnerships, intellectual property management, and utilization of research outputs.

The College's operational planning activities likewise demonstrate the integration of research into institutional planning. During the 2026 operational planning process, research and extension thrusts were presented as components of the institution's overall operational priorities, alongside financial and program planning.

This integration sends a clear institutional message to faculty, staff, and students: research is part of what DEBESMSCAT is expected to do as a higher education institution and not merely an optional individual activity.

2. Leadership Support for Research

A strong research environment begins with institutional leadership. DEBESMSCAT's senior management provides direction for research through the institutional Research Agenda, strategic planning, policy development, resource allocation, partnership building, and performance monitoring.

The College's strategic planning process has incorporated futures thinking, risk assessment, scenario development, and long-term institutional planning. The 2024–2028 strategic planning process, for example, emphasized future challenges, risk management, foresight, and roadmap development.

The institution subsequently developed a **Strategic Roadmap Towards Sustainable Development, Innovation and Futures Thinking 2025–2029**, demonstrating an effort to make research and innovation more anticipatory and future-oriented.

Leadership support is manifested through:

- a. Establishment of research priorities;
- b. Allocation of research resources;
- c. Creation and strengthening of research units;
- d. Support for research training;
- e. Approval of research projects;
- f. Development of external partnerships;
- g. Participation in research conferences;
- h. Support for publications and dissemination;
- i. Development of research infrastructure;
- j. Intellectual property management; and
- k. Recognition of research accomplishments.

These mechanisms contribute to a climate where faculty and students perceive research as institutionally valued.

3. A Clearly Defined Research Agenda

A research culture becomes stronger when researchers understand what kinds of research the institution considers strategically important. DEBESMSCAT therefore uses its Research Agenda as an organizing framework for research activities.

The agenda aligns research with:

- a. institutional priorities;
- b. Masbate development concerns;
- c. Bicol regional priorities;
- d. national research and development priorities;
- e. science, technology, and innovation directions;
- f. academic program needs; and
- g. global emerging trends.

This provides faculty and students with a common research direction while allowing individual researchers sufficient flexibility to pursue discipline-specific questions.

The Research Agenda also encourages researchers to move from isolated studies toward programmatic and thematic research. Researchers working on related concerns can form clusters, develop multi-year projects, seek external funding, and jointly produce research outputs.

This approach is expected to improve research productivity and increase the possibility of producing research with substantial institutional and community impact.

4. Research Policies and Governance

The research environment is supported by institutional policies that establish standards for research planning, proposal evaluation, funding, implementation, monitoring, ethics, intellectual property, publication, and dissemination.

Policies provide researchers with predictable procedures and clarify responsibilities.

Important policy areas include:

- a. Research proposal preparation and evaluation;
- b. Research funding and grants;
- c. Research project implementation;
- d. Research ethics;
- e. Intellectual property;
- f. Authorship and publication;
- g. Research incentives;
- h. Data management;
- i. External research collaboration;
- j. Technology transfer;
- k. Research utilization;
- l. Research dissemination; and
- m. Monitoring and evaluation.

The institutional intellectual property policy is particularly important because it establishes expectations regarding ownership, protection, and management of research-generated innovations. DEBESMSCAT documentation indicates that IP policy provisions are incorporated into research proposals and research contracts or agreements, subject to applicable institutional rules.

Clear policies reduce uncertainty and encourage researchers to pursue innovative work while protecting both the researcher and the institution.

5. Research Capacity Development

DEBESMSCAT recognizes that a research culture cannot be established simply by requiring faculty and students to conduct research. Researchers must be provided with opportunities to develop the competencies required to undertake high-quality research.

The College therefore promotes research capability development through:

- a. Research methodology training;
- b. Statistics and data analysis workshops;
- c. Academic writing;
- d. Proposal development;
- e. Research ethics;
- f. Research publication;

- g. Intellectual property;
- h. Technology transfer;
- i. Research management;
- j. Grant writing;
- k. Presentation skills;
- l. Research mentoring; and
- m. Participation in conferences and scholarly activities.

Capacity-building activities should be differentiated according to researcher needs.

Beginning researchers may require training in research design, literature review, data collection, and basic analysis. Experienced researchers may need advanced support in publication, grant writing, intellectual property, technology development, research leadership, and international collaboration.

Graduate students likewise receive research orientation and support. DEBESMSCAT's Graduate School research activities include orientation on institutional research policies and intellectual property, helping establish research awareness early in students' academic careers.

6. Mentoring and Research Communities

An important feature of a mature research culture is the transition from individual research toward research communities.

DEBESMSCAT encourages experienced researchers to mentor beginning researchers, faculty members, and students. Mentoring involve:

- a. Proposal conceptualization;
- b. Research design;
- c. Instrument development;
- d. Statistical analysis;
- e. Manuscript preparation;
- f. Journal selection;
- g. Peer-review response;
- h. Conference presentation;
- i. Grant application; and
- j. Intellectual property assessment.

Research teams may also be organized according to thematic areas identified in the Research Agenda.

For example, researchers in agriculture, engineering, information technology, education, business, and social sciences may collaborate on interdisciplinary projects addressing climate-smart agriculture, rural entrepreneurship, digital transformation, education technology, community resilience, or sustainable development.

This environment transforms research from an individual activity into a collective scholarly practice.

7. Research Funding and Resource Support

A productive research environment requires financial resources. DEBESMSCAT supports research through its institutional budget while also encouraging faculty researchers to secure external grants.

Institutional funding provides the foundation for:

- a. Research grants;
- b. Fieldwork;
- c. Laboratory activities;
- d. Research materials;
- e. Equipment;
- f. Data processing;
- g. Publication;
- h. Dissemination;
- i. Research conferences;
- j. Intellectual property protection; and
- k. Research capability-building.

The College's 2026 operational planning process integrated research priorities into the institutional financial planning system, including the consideration of the National Expenditure Program, Special Budget, and Other Income.

The institution also leverages external resources. Examples include the ₱2 million 2026 GAA support for Futures Thinking initiatives, the ₱2.35 million RAISE-Bicol IPTBM strengthening project, and the ₱4.7 million DTI support for the enhancement of the DEBESMSCAT Fabrication Laboratory. These resources strengthen the broader environment within which research and innovation can flourish.

8. Research Infrastructure and Facilities

A supportive research environment requires appropriate physical and technological infrastructure.

DEBESMSCAT continues to strengthen facilities that support research, innovation, instruction, and technology development. These include laboratories, technical facilities, fabrication facilities, agricultural research areas, information technology resources, research offices, and other specialized facilities.

The enhancement of the DEBESMSCAT Fabrication Laboratory through DTI support is particularly relevant because it provides researchers and students with access to advanced tools and machinery for prototyping, fabrication, innovation, and applied research.

Research infrastructure should be managed as shared institutional resources. Where appropriate, faculty members and students from different academic programs should be permitted to use facilities based on established procedures.

This encourages interdisciplinary research and maximizes institutional investment.

9. Digital Research Environment

The contemporary research environment increasingly depends on digital resources. DEBESMSCAT therefore needs to strengthen access to:

- a. Online academic databases;

- b. Electronic journals;
- c. Digital libraries;
- d. Statistical software;
- e. Research management systems;
- f. Institutional repositories;
- g. Research databases;
- h. Cloud-based collaboration tools;
- i. Geographic information systems;
- j. Research communication platforms; and
- k. Appropriate artificial intelligence tools.

Digital research capability is particularly important for Masbate because researchers may otherwise face geographic barriers to accessing specialized resources and collaborators.

The College's continuing international partnerships and research networks create additional opportunities for researchers to access external expertise and digital knowledge resources.

10. Research Ethics and Integrity

A positive research environment must also be an ethical environment. DEBESMSCAT promotes responsible research conduct by emphasizing research integrity, ethical treatment of participants, appropriate data management, intellectual honesty, proper citation, responsible authorship, and compliance with applicable institutional and national policies.

Research proposals involving human participants, sensitive information, communities, animals, or other ethically sensitive areas should undergo the appropriate review process.

The research environment should discourage:

- a. Plagiarism;
- b. Fabrication;
- c. Falsification;
- d. Inappropriate authorship;
- e. Data manipulation;
- f. Duplicate publication;
- g. Unauthorized use of research outputs; and
- h. Other forms of academic misconduct.

Research integrity is particularly important in building institutional credibility. Faculty and students should understand that research quality includes not only methodological rigor but also ethical responsibility.

11. Research Linkages and Collaboration

DEBESMSCAT promotes a research environment that extends beyond the physical boundaries of the College.

External linkages provide researchers with access to:

- a. Technical experts;

- b. Laboratories;
- c. Research equipment;
- d. Research sites;
- e. Datasets;
- f. Funding opportunities;
- g. Publication networks;
- h. Specialized training;
- i. International research communities; and
- j. Technology-transfer opportunities.

The College's partnerships with DOST, DOST-PCAARRD, DA, BISCAT, Kansas State University, and other institutions demonstrate the development of a networked research environment.

The DOST-DEBESMSCAT Project SARAI collaboration, for example, connects the College with science-based agricultural technologies involving GIS, remote sensing, crop monitoring, and decision-support systems.

The renewed Kansas State University partnership likewise expands opportunities for academic exchange, joint research, and professional development.

12. Student Research Environment

DEBESMSCAT recognizes students as important contributors to the institutional research ecosystem.

Students are exposed to research through:

- a. Research-oriented courses;
- b. Undergraduate research;
- c. Capstone projects;
- d. Thesis and dissertation;
- e. Research competitions;
- f. Research conferences;
- g. Research internships;
- h. Community-based research;
- i. Faculty-student research projects; and
- j. Innovation activities.

Graduate students are particularly encouraged to undertake research aligned with institutional and community priorities.

A strong student research environment provides opportunities for students to present their findings, receive feedback, publish where appropriate, participate in conferences, and explore innovation or commercialization pathways.

This approach develops graduates who are not merely consumers of knowledge but producers and users of evidence.

13. Faculty Research Engagement

- a. Propose and implement research;
- b. Join interdisciplinary research teams;
- c. Apply for internal and external grants;
- d. Publish research findings;
- e. Present at conferences;
- f. Develop intellectual property;
- g. Participate in research training;
- h. Mentor student researchers;
- i. Undertake community-based research; and
- j. Translate research outputs into extension and innovation.

The institution can further encourage engagement through research incentives, awards, publication support, reduced teaching loads where authorized, research fellowships, mentoring arrangements, and recognition of outstanding research outputs.

A research culture becomes sustainable when researchers routinely share their work.

- a. Institutional research conferences;
- b. Research fora;
- c. Scholarly publications;
- d. Technical reports;
- e. Policy briefs;
- f. Research presentations;
- g. Poster presentations;
- h. Extension materials;
- i. Technology exhibits;
- j. Community demonstrations; and
- k. Digital platforms.

Dissemination is therefore not treated as the final administrative requirement of a research project. It is part of the research culture because it enables researchers to receive feedback, establish networks, identify collaborators, and increase the utilization of research outputs.

15. Research Utilization and Innovation

DEBESMSCAT's research environment encourages researchers to consider utilization and innovation from the beginning of the research process.

Researchers are encouraged to ask Who will use the findings? What problem will the research solve? Can the output be transformed into a technology, policy, training program, product, service, or community intervention? Does the output have intellectual property or commercialization potential?

This orientation is supported by the College's Intellectual Property and Technology Business Management initiatives. Its RAISE-Bicol engagement specifically strengthens IP policy, technology-transfer capacity, external linkages, and commercialization capabilities.

Consequently, the institutional research environment supports the movement from:

Research → Knowledge → Innovation → Utilization → Technology Transfer → Impact

16. Futures Thinking and Research Culture

One of the distinctive elements of the emerging DEBESMSCAT research environment is the institutionalization of futures thinking.

Rather than focusing exclusively on current problems, the College encourages researchers to examine emerging trends and future scenarios.

DEBESMSCAT has developed a Strategic Roadmap Towards Sustainable Development, Innovation and Futures Thinking 2025–2029 and has secured dedicated GAA support for its Futures Thinking initiatives.

This creates opportunities for research on:

- a. future work;
- b. artificial intelligence;
- c. digital transformation;
- d. future education;
- e. food security;
- f. climate resilience;
- g. emerging technologies;
- h. sustainable agriculture;
- i. future tourism;
- j. demographic changes;
- k. entrepreneurship; and
- l. future-ready institutional governance.

Futures thinking strengthens research culture by encouraging faculty and students to ask not only “What is happening?” but also “What could happen?”, “What should happen?”, and “How can research help shape desirable futures?”

17. Recognition and Incentives

Research culture is strengthened when accomplishments are recognized.

DEBESMSCAT may recognize research contributions through:

- a. Outstanding researcher awards;
- b. Best research awards;
- c. Publication recognition;
- d. Research presentation awards;
- e. Innovation awards;
- f. Intellectual property recognition;
- g. Research grants;
- h. Certificates of recognition;
- i. Inclusion in institutional accomplishment reports; and
- j. Other authorized incentives.

Recognition communicates that research is valued by the institution and contributes to professional identity and career development.

A mature research environment should recognize not only publications but also meaningful research outcomes such as technology adoption, community impact, policy utilization, innovation, intellectual property, and successful external funding.

18. Research Communication and Knowledge-Sharing Culture

DEBESMSCAT promotes a culture in which researchers share knowledge rather than working in isolation.

Knowledge-sharing mechanisms include:

- a. Research seminars;
- b. Brown-bag sessions;
- c. Research colloquia;
- d. Methodology workshops;
- e. Writing groups;
- f. Research mentoring;
- g. Interdisciplinary meetings;
- h. Research newsletters;
- i. Institutional repositories;
- j. Research conferences; and
- k. Faculty research presentations.

These activities provide opportunities for researchers to learn from one another, improve research methods, identify potential collaborations, and avoid duplication of research efforts.

The institution's office of the Vice President for Research, Development, Extension, Innovation, Creative Works and Knowledge Management can serve as the institutional hub for this knowledge-sharing ecosystem.

19. Research-Instruction-Extension-Production Nexus

DEBESMSCAT's research environment is strengthened by connecting research with the other major functions of the institution.

Research → Instruction → Extension → Production → Innovation → Community Impact → New Research Questions

Research findings can be incorporated into classroom teaching and instructional materials. Student projects can generate new research questions. Research outputs can be transferred through extension programs. Technologies can support production and enterprise development. Feedback from communities and industries can generate new research priorities.

This interconnected model is particularly appropriate to DEBESMSCAT's agriculture and technology orientation.

It ensures that research is visible throughout the institution rather than confined to the research office.

20. Inclusive and Supportive Research Culture

The institution also seeks to create an inclusive research environment in which faculty members, staff, and students are provided opportunities to participate regardless of academic rank or disciplinary affiliation.

Beginning researchers are given opportunities to work with experienced researchers. Students should have access to research activities. Non-teaching personnel with relevant expertise should be encouraged to participate in institutional and operational research where appropriate.

The institution likewise promote gender-responsive, culturally sensitive, socially inclusive, and community-responsive research.

This is particularly important when conducting research involving vulnerable communities or marginalized groups.

21. Monitoring and Evaluation of Research Culture

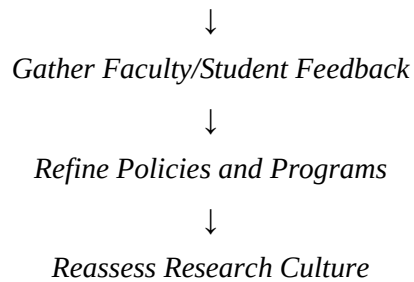
DEBESMSCAT should periodically assess the strength of its research environment using measurable indicators.

22. Continuous Improvement of the Research Environment

The research environment should not remain static. DEBESMSCAT should continuously improve it based on evidence and feedback.

The improvement cycle may be represented as:





This ensures that research development becomes a continuous institutional process.

23. Overall Characterization of the DEBESMSCAT Research Environment

Overall, the research environment of DEBESMSCAT can be characterized as emerging, collaborative, development-oriented, innovation-driven, and increasingly future-focused.

It is institutionally supported because research is incorporated into strategic and operational planning.

It is development-oriented because research priorities respond to the needs of Masbate, the Bicol Region, and national development.

It is collaborative because the College increasingly works with government agencies, higher education institutions, research organizations, communities, industries, and international partners.

It is innovation-driven because research is connected with intellectual property, technology transfer, fabrication, entrepreneurship, and commercialization.

It is future-focused because the institution has incorporated futures thinking and sustainability into its strategic development.

It is student- and faculty-oriented because research participation is integrated into academic development and professional growth.

It is impact-oriented because the ultimate goal is to translate research into improvements in education, agriculture, technology, communities, policy, and institutional performance.

DEBESMSCAT is developing a research environment that seeks to move beyond compliance-driven research toward a sustainable institutional research culture. The environment is built on leadership commitment, a clearly defined Research Agenda, institutional policies, research funding, research infrastructure, capability development, mentoring, collaboration, dissemination, intellectual property management, innovation, and research utilization.

The institution's strategic planning and operational mechanisms demonstrate that research is increasingly integrated into institutional decision-making. Its investment in research and innovation infrastructure, external partnerships, intellectual property and technology business management, and futures thinking further strengthens the environment in which researchers can operate.

The environment also recognizes that research culture must include faculty, staff, and students. Faculty members are encouraged to undertake and publish research, secure external grants, mentor students, develop innovations, and contribute to community-based research. Students are exposed to research through courses, theses, dissertations, capstone projects, conferences, innovation activities, and faculty-student research collaborations. Research policies and ethics mechanisms provide the standards necessary to maintain integrity and credibility.

For DEBESMSCAT, the ultimate objective is to establish an environment where research becomes a normal and valued way of thinking, working, teaching, learning, solving problems, and serving communities. Researchers should be encouraged to identify meaningful questions, collaborate

across disciplines, access appropriate resources, generate credible evidence, disseminate findings, protect innovations, and translate knowledge into practical solutions.

The desired institutional culture can therefore be expressed as:

“Research is not merely an output of DEBESMSCAT; it is a way through which the institution learns, innovates, serves, and transforms.”

Through sustained institutional leadership, adequate resources, strong partnerships, capacity development, research infrastructure, ethical governance, knowledge sharing, innovation, and continuous improvement, DEBESMSCAT can progressively establish a research environment capable of producing high-quality, relevant, innovative, community-responsive, and globally connected research that contributes to the transformation of Masbate and strengthens the College's aspiration for national and international recognition.

A.3 Acknowledged Research Capability of the Institution

A.3.1. Present data to demonstrate the research capability and prominence of the institution, as recognized by external agencies/institutions.

Name of the Award	Place and Date of Award	Awarding Agency	Scope of the Award (International, National, Regional, Local)

A.3.2 Present data on research trainings conducted by the institution for its clientele and stakeholders

Title of Training	Date and Place Conducted	No. of Participants
DEBESMSCAT Future Masterclass 2026	February 18-20, 2026	50
IP IGNITE Seminar	October 20-24, 2025	36

A.4 Participants in the Research Process

A.4.1 University/College Officials

Name	Specialization	Specific Function/s
RODOLFO B. BURAC JR.	Education	Committee Chair, Research Evaluation Committee
SHERWIN E. BALBUENA	Education, Statistics	Member, Research Evaluation Committee
NONALYN D. TOMBOCON	Entrepreneurship	Member, Research Evaluation Committee
ERDEE C. CAJURAO	Education, Biology	Member, Research Evaluation Committee

A.4.2 Faculty

Name	Specialization	Specific Function/s
LAURENCE G. ALMOGUERA	Agriculture, Engineering	Research Program Chair, College of Agriculture
MARJOBEL R. CASTRO	Economics	Research Program Chair, College of Business, Tourism and Economics
ELLA P. LOTIVIO	Education	Research Program Chair, College of Education
SHENNIE B. VILLANUEVA	Civil Engineering	Research Program Chair, College of Engineering
HONEY BRIOBO	Industrial Technology	Research Program Chair, College of Industrial Technology

A.4.3 Staff

Name	Specialization	Specific Function/s
MARC JACO COJA	Education	Office Aide, VPREI
MARIEL GRACE B. BELTRAN	Education	Research Project Aide
BRYAN L. ATIBAGOS	Education	Research Project Aide

A.5 Research Outputs

Research Project/Title	Research Output/s
"Optimization of Ethanol Production from Batuan (<i>Garcinia binucao</i>) Fruit Using Response Surface	An antimicrobial soap with batuan (<i>Garcinia binucao</i>) fruit extract

Methodology” by Gian Carlo
R. Malto



A.6 Utilization/Commercialization

Research Output/Findings	Clientele/End-user	Description of extent of utilization and commercialization.
An antimicrobial soap with batuan (<i>Garcinia binucao</i>) fruit extract	Cayabon Agrarian Reform Cooperative and Jamorawon Multi-Purpose Cooperative	Pre-commercialization and adaptation of Batuan Soap Technology



The Department of Agrarian Reform (DAR) Provincial Office of Masbate and the Dr. Emilio B. Espinosa Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT) formally signed a Memorandum of Agreement (MOA) which aids in boosting support for the agrarian reform beneficiaries (ARBs) in the province. The partnership entails the provision of technical assistance, agricultural training, and research-based interventions all aimed at improving the skills of the ARBs.

One of the first activities to be implemented by DEBESMSCAT as per the MOA is the conduct of training on the pre-commercialization and adaptation of Batuan Soap Technology for two (2) agrarian reform cooperatives, namely the Cayabon Agrarian Reform Cooperative and Jamorawon Multi-Purpose Cooperative. The training aims to empower the ARBs to be knowledgeable and capable of discovering new opportunities that come with value-addition.

DEBESMSCAT will provide technical expertise and extension services, while DAR Masbate will organize the beneficiary groups and ensure the programs are in line with the community's needs. The two institutions expressed that this partnership is a clear demonstration of their shared dedication to the empowerment of local farmers and the promotion of sustainable rural development throughout Masbate province.

A.7 Research Journal

Name of Research Journal/ Publication	ISSN	Base College/ Institute Dept.	Frequency of Publication	Extent of Publication
Kurukod Journal of Agriculture and Technology	3155-6299	College of Agriculture	Bi-annual	International
Kurukod Journal of Education and Social Science	3082-3900	College of Education	Bi-annual	International

A.8 Cite patents and/or indications that quality research activities have been undertaken.

All research activities of the institution are regulated through a systematic in-house review process covering both research proposals and completed research projects. This mechanism serves as an internal quality assurance system that ensures research initiatives are aligned with institutional research priorities, relevant academic standards, ethical considerations, and established research policies and guidelines. Researchers are required to subject their proposals and completed studies to the appropriate review process before proceeding to implementation, dissemination, or publication.

The Research Evaluation Committee carefully screens submitted research proposals and completed research outputs based on established criteria, including the relevance and significance of the research problem, clarity of objectives, appropriateness of the research design and methodology, adequacy of data analysis, validity of findings, and consistency between the research questions, methods, results, and conclusions. The committee also examines the overall technical quality, academic rigor, and potential contribution of the study to the discipline, the institution, and the communities it serves.

Following the evaluation, researchers are provided with constructive feedback and recommendations for improvement. They are given opportunities to revise their manuscripts and address the observations and recommendations of the reviewers before the research outputs proceed to publication, conference presentation, or other forms of dissemination. This process promotes continuous improvement in research quality and strengthens the credibility and integrity of institutional research outputs.

Through this in-house review mechanism, the institution ensures that research outputs undergo an appropriate level of quality control and academic scrutiny prior to external dissemination. It likewise provides researchers with technical and scholarly guidance that enhances the quality of their work while fostering a culture of rigorous, ethical, and meaningful research within the institution.

In fact, DEBESMSCAT researchers are now among those who have accepted and published papers in Scopus- and Web of Science-indexed journals. Peer-review and editorial review in these journals are known to have the highest standards in academic publishing. Hence, the research activities of our faculty members are in line not only with internal standards but also with the expected quality benchmarks in the international research community.

A.9 Cite at least three priority ways that you've done to excel in research.

DEBESMSCAT continuously strengthens the research capacity of its faculty through mentoring, professional development, advanced studies, and research productivity incentives. Faculty members are provided with opportunities to participate in mentoring sessions that focus on practical strategies and techniques for developing research manuscripts and publishing them in reputable academic journals. These sessions provide guidance on selecting appropriate journals, structuring research articles, improving academic writing, responding to reviewers' comments, adhering to publication standards, and navigating the submission and peer-review processes. Through these activities, faculty members are supported in transforming their completed research studies into quality scholarly publications and increasing the visibility and impact of their research outputs.

The institution also supports faculty members in pursuing advanced professional development and graduate education. Faculty are encouraged and supported to undertake retooling programs, specialized training, and advanced degree programs in leading universities and institutions relevant to their respective fields of specialization. These opportunities enable faculty members to update their disciplinary knowledge, strengthen their methodological competencies, acquire specialized research skills, and engage with contemporary developments in their fields. Exposure to established academic and research communities likewise provides opportunities for collaboration, networking, and the adoption of best practices that can be translated into the institution's research and academic programs.

To further promote a culture of research productivity, DEBESMSCAT provides financial incentives and recognition for faculty research accomplishments. The institution allocates approximately ₱1 million annually to support research awards and incentives for faculty members who demonstrate productivity in areas such as research publication, conference presentation, and research citations. These incentives recognize the scholarly contributions of faculty members and encourage them to pursue research that meets quality standards and contributes to the advancement of their respective disciplines.