

LAKE VICTORIA RESEARCH INITIATIVE (VicRes)



Strategic Plan 2010 – 2014

JULY 2010



Table of Contents

EXECUTIVE SUMMARY	1
1.0 INTRODUCTION	4
1.2 THE INTER-UNIVERSITY COUNCIL OF EAST AFRICA (IUCEA).....	4
1.2.1 IUCEA's Institutional Mandate and Functions	<i>Error! Bookmark not defined.</i>
1.2.2 IUCEA's Role in VicRes	<i>Error! Bookmark not defined.</i>
1.3 THE LAKE VICTORIA RESEARCH INITIATIVE (VICRES).....	ERROR! BOOKMARK NOT DEFINED.
1.4. VISION AND MISSION	9
1.5 ACHIEVEMENTS OF VICRES PHASES I AND II	10
1.6 Challenges of VicRes Phases I and II.....	11
1.7 Emerging Issues Considered In the Development of the Strategic Plan	11
1.8 Strengths, Weaknesses, Opportunities and Threats of VicRes.....	13
1.8.1 Strengths	13
1.8.2 Weaknesses	14
1.8.3 Opportunities	15
1.8.4 Threats	15
2.0 THE STRATEGIC PLAN 2010 – 2014	ERROR! BOOKMARK NOT DEFINED.
2.1 Introduction to VicRes III.....	<i>Error! Bookmark not defined.</i>
2.2 Purpose of the Strategic Plan.....	<i>Error! Bookmark not defined.</i>
2.3 Strategic Focus and Timeframe of the Plan	<i>Error! Bookmark not defined.</i>
2.4 GUIDING PRINCIPLES AND UNDERLYING ASSUMPTIONS FOR UNDERTAKING THE PRIORITY ACTIVITIES	16
2.4.1 Guiding Principles for this strategic plan.....	<i>Error! Bookmark not defined.</i>
2.4.2 Assumptions Underlying the Priority Action Plan.....	<i>Error! Bookmark not defined.</i>
2.4.2 KEY RESULTS AREAS (KRA) OF THE STRATEGIC PLAN	ERROR! BOOKMARK NOT DEFINED.
2.5 STRATEGIC ACTIONS AND EXPECTED OUTCOMES.....	16
2.5.1 Rationalization and Consolidation of Research	16
2.5.2 Strengthening research networks, human and institutional research capacities and infrastructure for effective generation, communication/dissemination and use of research outputs.	21
Overall Objective	<i>Error! Bookmark not defined.</i>
2.5.3 Mobilizing sufficient resources for adequate and sustainable financing of scientific research that contributes to the knowledge economy.....	<i>Error! Bookmark not defined.</i>
2.6 IMPLEMENTATION OF THE STRATEGIC PLAN	ERROR! BOOKMARK NOT DEFINED.
2.7 Monitoring and Evaluation of VicRes Research Activities	<i>Error! Bookmark not defined.</i>
2.8 FINANCING OF THE STRATEGIC PLAN	ERROR! BOOKMARK NOT DEFINED.
2.9 STRATEGIC OBJECTIVES AND RESULTS FRAMEWORK	ERROR! BOOKMARK NOT DEFINED.
2.10 SUMMARY RESULTS MANAGEMENT FRAMEWORK FOR THE VICRES STRATEGY	24

Acronyms and Abbreviations

AFRORNET	African Forestry Research Network
ASARECA	Association for Agricultural Research in Eastern and Central Africa
BIO-EARN	Eastern African Regional Programme and Research Network for Biotechnology, Biosafety and Biotechnology Policy Development Programme
EABC	East African Business Council
EAC	East African Community
ECOVIC	East African Communities Organization for the management of Lake Victoria Resources
HH	Household
IUCEA	Inter-University Council for East Africa
IWRM	Integrated Water Resource Management
LVB	Lake Victoria Basin
LVBC	Lake Victoria Basin Commission
LVEMP	Lake Victoria Environmental Management Project
LVFO	Lake Victoria Fisheries Organisation
LVRLAC	Lake Victoria Region Local Authorities Co-operation
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
NaFIRRI	National Fisheries Resources Research Institute
NUR	National University of Rwanda
RCO	Regional Coordinating Office
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
Sida	Swedish International Development Agency
UoB	University of Burundi
URA	Uganda Revenue Authority
VicPac	VicRes Policy Advisory Committee
VicRes	Lake Victoria Research Initiative
VicSac	VicRes Scientific Advisory Committee

Executive Summary

This document presents a five-year Strategic Plan for the Lake Victoria Research Initiative (VicRes) for the period 2010-2014. The strategic plan has benefited from the findings of the research audit, stakeholders inputs and discussion of the draft at the Results-Based Management workshop that was held in Jinja during November 22-26, 2009. Considerable amount of information was also incorporated from documents reviewed as part of the process of developing this strategic plan.

Since its inception in 2002, VicRes programme has registered a number of achievements. It has created a forum for regional research networking, laid a foundation for effectively developing institutional and human resource capacity for scientific research in the East African region and most importantly, relevant scientific knowledge base has been progressively developed.

The strategic actions for the period 2010-2014 have been determined in the context of VicRes' achievements to-date, the challenges encountered in Phases 1 and 2, and in view of the emerging demands which include (i) the need for stronger focus on applied research for product development and policy formulation (ii) more emphasis on trans-boundary ecosystem resources management (iii) focus on climate change and (iv) emphasis on effective communication, networking and dissemination of research results. Arising from these, VicRes' obligation is to position itself to become a leading regional research programme and play a leading role in the socio-economic transformation of the Lake Victoria Basin (LVB) by generating accurate and reliable information desired for decision-making, development planning and development cooperation among the East African Community Partner States.

This Strategic Plan has been developed in the context of the above scenarios and cover three broad strategic areas:

1) Rationalization of Research: VicRes' research portfolio has been consolidated into two themes:

a) Natural Resources Governance: the following strategic objectives shall be perused:

1. To improve water management and conservation for domestic, industrial and agricultural use by different water users and local communities living in LVB.
2. To adopt sustainable agricultural production methods and technologies for increased productivity and poverty alleviation.
3. To adopt alternative technologies for sustainable and efficient energy utilization.
4. To reduce the impact of climatic change/variability on plant resources in LVB.

b) Fisheries and Aquaculture technologies: the following strategic objectives shall be perused:

1. To increase fish production through improved aquaculture technologies in Lake Victoria Basin.
2. To increase the quantity and quality of fish stocks in lakes, rivers and on-farm in the Lake Victoria Basin.

3. To examine financial management practices amongst the fisher folk in the Lake Victoria Basin.

These thematic areas reflect development priorities of Lake Victoria Basin and the East African region in the medium term. Scientific quality, trans-boundary resource management and climate change adaptation shall be the focus of research in the thematic areas.

2) Research Networks, Capacity Building and Use: networking among researchers and IUCEA member universities and collaboration with research institutions, with a view to promoting development cooperation between the East African Community Partner States, shall be strengthened and maintained. This strategy will focus on two thematic areas: Research Networks and Capacity Building and Use.

a) Research Networks shall be achieved by pursuing the following strategic objective:

- To establish a functional research network aimed at improvement of health, reducing poverty, maintaining ecosystem health and addressing environmental problems in Lake Victoria Basin by 2014.

b) Capacity Building and Use shall be achieved by pursuing the following strategic objectives:

1. To attain and maintain equitable participation of researchers in the Partner States in the VicRes activities.
2. To enhance facilities in at least five research institutions and upgrade them to functional centres of research excellence in the region by 2014.
3. To increase training and participation of female researchers in East African institutions up to 15% by 2014.

3) Resource Mobilization to Sustain Research activities: the aim is to secure adequate resources (financial, human and physical) to sustain VicRes' activities. The following strategic objective shall be pursued:

- To put in place a framework for resource mobilization by 2014.

The Results Management Matrix (Log-frame) presented in Annex 1 is the main instrument for Monitoring and Evaluation of VicRes' activities. It provides the targets, indicators, and framework for tracking performance. VicRes Secretariat and key stakeholders will confirm the status of the indicators and set annual targets for each performance indicator to guide implementation of this strategic plan.

Funding for implementation of activities in this strategic plan will come from four main sources:

- 1) Government of Sweden through the Swedish International Development Agency (Sida) that shall support VicRes' activities in Phase 3 until the Inter-University

Council for East Africa (IUCEA) establishes a financial system for supporting VicRes from the EAC budget allocation.

- 2) Subventions from the EAC Secretariat and contributions by Government of the East African Community Partner States to the IUCEA in support of VicRes.
- 3) Endowments and Levies.
- 4) Other development partners through resource mobilization by the IUCEA/VicRes.

Grant financing from Sida for VicRes Phase 3 has already been approved and signed by the Agreement Partners (Sida and IUCEA) for period January 2009 to June 2014. This grant will support the implementation of VicRes activities in this strategic plan over the same period.

The VicRes Scientific Advisory Committee with international and regional representation shall mobilize resources for VicRes research. The amount of resources mobilized shall determine the number of research projects and related activities to be funded annually in the thematic areas and strategic objectives presented in the matrix above.

Implementation of the resource mobilization strategy during the period of this strategic plan is geared towards achievement of organizational financial sustainability. It is expected that by 2014 an endowment fund for research and institutionalization of VicRes as a leading East African Community Research Initiative shall have been achieved.

The implementation of this Strategic Plan commences when VicRes Phase 3 is one year into implementation. Therefore, activities already implemented before this strategic plan came into force shall be harmonized with those stated in this strategic plan for the remaining period up to 2014. Detailed information to assist the implementation of this strategic plan is given in Annex 2.

1.0 INTRODUCTION

Research is an important aspect of development because it generates information and creates opportunities for sharing knowledge. Development cannot take place without sufficient application of indigenous and modern knowledge in planning, decision making and policy implementation. Globally, much emphasis has been placed on knowledge creation and utilization and there is a growing trend towards development of knowledge-based economies. This growth should be incongruent with the capacity to generate information to support such economies. The economies of the East African Community partner States are growing at an average of 4-7%, which compares favourably with the economies of other developing countries in sub-Saharan Africa and the rest of the world. Economic development planning based on accurate and reliable data is essential for sustaining the current economic growth and even increasing it in future. Institutions that are engaged in research activities, therefore, have a critical role to play in information generation, processing and dissemination to development planners and decision makers and policy implementers.

According to the Treaty for the establishment of the East African Community (as amended on 14th December, 2006 and 20th August, 2007) Article 102 section 2 (b) on Education and Training states that Partner States shall, with respect to education and training, strengthen existing and where necessary establish new common research and training institutions. In addition, Article 103 sections 1 (a-i) on Science and Technology recognizes the fundamental importance of science and technology in economic development and urges, the Partner States to undertake and promote co-operation in the development of science and technology within the Community including research on different aspects of Science and Technology. Chapter three, Article 9 of the East African Community Treaty establishes the organs and Institutions of the Community. The East African Community Act Supplement No. 2 of 2009 establishes IUCEA under the EAC and specifies its functions. Part II section 6 (b) (i-iv) spells out the functions of IUCEA in terms of promotion of collaborative research and related developments programmes in the region. The institutionalization of VicRes as a regional research initiative is in line with the above provisions of the EAC Treaty and the IUCEA Act. This strategic plan provides a platform for realization of the provisions in the Treaty and the Act on training and research in the region.

1.2. The Inter-University Council of East Africa (IUCEA)

The Inter-University Council for East Africa (IUCEA) is a regional inter-governmental organisation, whose mission is to encourage and develop mutually beneficial collaborations among Universities in East Africa, and between them and governments and other organisations, both public and private. It is one of the autonomous institutions of the East African Community (EAC), whose membership comprises the Republics of Burundi, Kenya, Rwanda, Tanzania and Uganda.

In 1970, an Inter University Committee, with its headquarters in Kampala, was established under the East African Community to facilitate collaboration in university education among University of Dar es Salaam, Makerere University and University of

Nairobi. In spite of the collapse of the East African Community in 1977, the three universities continued to collaborate mainly through exchange of external examiners. In 1980, the Governments of Kenya, Tanzania and Uganda agreed to re-establish the committee after signing a memorandum of understanding that set its objectives and functions. The Committee was later transformed into the Inter University Council for East Africa. In August 1998, the Commonwealth Higher Education Management Services (CHEMS) carried out a study aimed at revitalizing IUCEA so that it can play a significant role in the development of tertiary education and research in both the social and natural sciences in the Partner States of the East African Community. CHEMS' report led to revitalization of IUCEA. Between 2000 and 2002, the protocol for re-establishment of IUCEA was developed and signed by the three East African Partner States with the aim of harmonizing the activities of the institution. The role of IUCEA is to facilitate collaboration and networking between universities in East Africa, provide a forum for discussion on a wide range of academic and other matters relating to higher education, and helping to maintain high and comparable academic standards.

IUCEA's Perspective Plan for the period 2006-2015 defines the components of the vision, mission, functions, core values, strategic goals and objectives. The goal of the Perspective Plan is to transform IUCEA into a strong, competitive and responsive regional institution responsible for coordination of higher education matters including research. The goal is expected to be achieved through (i) operational and financial sustainability (ii) effective strategic support to member universities in teaching, research public service roles and (iii) significant contribution to national, regional and global higher education policy development framework. The perspective plan has two phases: Phase I (2006-2010) is aimed at developing operational and financial sustainability capacity of IUCEA and support to member universities in teaching, research and public service. Phase II (2011-2015) focuses on up-scaling activities designed to support member universities in teaching, research, public service, and development of national, regional and global higher education policy.

1.3. The link between IUCEA and VicRes

The Inter-University Council for East Africa (IUCEA) is one of the institutions of the East African Community whose mandate includes coordination of regional research activities. IUCEA's Five-Year Rolling Strategic Plan for 2006/2007-2010/2011 places great emphasis on mobilization of resources to support strategic regional research and participation of East African Universities in cutting edge research projects. The IUCEA Act, 2009 indicates that the Council shall contribute to meeting national and regional development needs and one of its functions is to promote collaborative research including:

- i) Cooperative development of research for masters and doctoral programmes.
- ii) Facilitation of development of centres of excellence in research.
- iii) Creation and development of cooperative relationships with development partners and existing organisations with similar research objectives.
- iv) Helping to establish a database on research capacity and current activities in the East African Community.

VicRes is a research programme of the IUCEA and is well-positioned to spearhead the coordination of research activities in the East African Community's Partner States. This strategic plan defines the future path of VicRes' regional research activities and clearly affirms the commitment of IUCEA and Sida to make it a leading research initiative in East Africa. In addition, the implementation of this Strategic Plan is linked to achievement of Key Result Areas 5, 8 and 12 of the IUCEA's Five-Year Rolling Strategic Plan for 2006/2007-2010/2011. Key Result Area 5 focuses on financial capacity and sustainability, Key Result Area 8 on strategic regional training and research programmes and Key Result Area 12 is on internationalization of higher education and research in East Africa.

2.0. BACKGROUND TO THE LAKE VICTORIA BASIN AND ITS DEVELOPMENT

Lake Victoria is the second largest fresh water body in the world that is endowed with enormous fresh water fishery resource. It has a total surface area of 68,870 km² and a total catchment/basin area of 180,950 km². The lake water is shared by Kenya, Tanzania and Uganda but the lake basin covers parts of Kenya (21.5%), Tanzania (44%), Uganda (15.9%), Rwanda (11.4%) and Burundi (7.2%). The Lake and its basin are endowed with a variety of natural resources that are of local, regional and global benefits. In addition to its environmental values such as maintaining the hydrological cycle, the Lake supports hydro power generation, water transport, tourism and recreation. In addition, the Lake is a source of drinking water for humans and livestock, industrial use and irrigation. However, these benefits have for a long time been threatened by environmental degradation due to human activities as manifested by reduced fish stocks, decline in biodiversity, increased pollution and water hyacinth infestation, wetland destruction and loss of littoral habitats.

The strategic location of the lake and the geographical distribution of the basin amongst the five Partner States provide a strong reason for development cooperation among the Partner States. Lake Victoria Research Initiative (VicRes) contributes to the achievement of the cooperation through collaborative research activities that address the challenges of development, livelihoods and natural resources management in the basin.

2.1. The Origin of Lake Victoria Research Initiative (VicRes)

For a long time, there have been attempts to generate information to guide policy on sustainable management of Lake Victoria and the basin. Given that sustainable development hinges on informed decisions, in 2001 the East African Partner States (Kenya, Tanzania and Uganda) signed an agreement with the Department for Research Cooperation of the Swedish International Development Agency (Sida/SAREC) to establish a research fund to support the Lake Victoria Research Initiative (VicRes). In 2002 VicRes came into existence as a research programme implemented by the Inter-University Council for East Africa. The programme's core activity is to coordinate research in the East African region as part of the Lake Victoria Development Programme (LVDP), which focuses on environmental restoration and improvement of the livelihoods

of people in the Lake Victoria Basin (LVB). Since then, staff of universities, research institutions and firms involved in research has been supported to undertake multi-disciplinary, gender sensitive and regional research to enhance the scientific understanding of the poverty-environment nexus through generation and dissemination of information and technological innovations. VicRes has been implemented in Phases, an approach that allows incorporation of lessons learnt, gaps identified and emerging issues in development, environment and natural resources. Considering that the development challenges facing the Lake Victoria Basin cannot be solved through short-term interventions, Phases 1 and 2 of VicRes were envisioned as the beginning of long-term efforts to build and enhance research capacity to support sustainable development of the LVB.

VicRes awards research grants on a competitive basis open to researchers in universities and research institutes in the EAC partner states: Burundi, Kenya, Rwanda, Tanzania and Uganda. The programme is implemented through a regional coordination office located in IUCEA secretariat in Kampala, Uganda. Since 2002, the Policy and Scientific Advisory Committees provided strategic guidance and overall governance of VicRes' activities. Members of the committees were drawn from institutions in the East African Community (EAC) Partner States. Host institutions of researchers that include IUCEA's member universities and research institutions participate in the management of research grants and implementation of the research activities.

2.2. VicRes Phase 1

Since 2002, two phases of VicRes have been implemented with support from Swedish International Development Agency (Sida): Phase 1 from November 2002 to December 2005 with a total funding of SEK 17,106,000 (USD 3,512,203). This phase had two parts: Part I which ended in 2003 set up the Secretariat/Regional Coordination Office (RCO), network with partner institutions, regulations for VicRes grant awards and management, and the operationalization of the Scientific and Policy Advisory Committees. Part II initiated the research grant process starting with a call for proposals in January 2003 on the thematic area on Wetlands that was identified through a baseline study. In 2004 and 2005, a second thematic area on Land Use was added. By the end of Phase I in December 2005, there were 238 researchers involved in 57 research projects in different aspects of Wetlands and Land Use.

2.3. VicRes Phase 2

Phase 2 (January 2006 to December 2008) built on the activities and achievements of Phase 1. It received a total funding support of SEK 50,400,000 (USD 7,474,220). A new thematic area on Catchment Management and Conservation was introduced. As at December 2008, ninety six projects were being implemented in six thematic areas involving over 450 researchers and at least two postgraduate students per project serving as field or laboratory assistant. The research themes were: Ethnobotany and Health, Fisheries and Aquaculture, Indigenous and Local Knowledge, Land Use, Natural Resources Management and Pollution and Heavy Metals.

3.0. VICRES PHASE 3 STRATEGIC PLAN

Phase 3 started in January 2009 following a successful implementation of VicRes Phases 1 and 2. It is expected to build on and consolidate the achievements, lessons learnt and best practices and address the gaps and challenges of VicRes 1 and 2. Furthermore, it is aimed at increasing utilization of research results and to upscale the impacts of VicRes research in the Lake Victoria basin and the surrounding areas in the Partner States. Phase 3 is also being implemented with a view to enhancing the utility of research findings by the stakeholders and later to translate the results into products of commercial or industrial value. As such, Phase 3 places great emphasis on supporting research of high scientific quality and outputs and especially those that enhance local communities' adaptation to effects of climate change. It is hoped that in the next phase, VicRes will emphasize promotion of innovations and linking the researchers to the business community/private sector as research results of high scientific quality become available for product development.

3.1. Purpose of this Strategic Plan

This Strategic Plan of Lake Victoria Research Initiative (VicRes) covers the period 2010-2014. Its main purpose is to guide the activities of VicRes Phase 3 which covers the period January 2009 to June 2014. It builds on the achievements of Phases 1 and 2 and lays a firm foundation for transforming VicRes into a leading regional research coordination and development initiative in East Africa. It outlines and describes timelines, activities, expected results, monitoring and evaluation framework, and institutional resource utilization. The long-term goal of this strategic plan is to institutionalize and mainstream the VicRes programme into the EAC's structures and ensure continuous research on Lake Victoria and the basin for poverty alleviation through socio-economic transformation and strengthening development cooperation among the Partner States.

In effect, some of the activities already carried out in 2010, as the Plan was being completed, are also reflected. For example, one of the key activities in 2010 has been the first call for research proposals in VicRes Phase 3 that was published in June 2010 focusing on two thematic areas with special reference to climate change adaptation in the Lake Victoria basin. Given the dynamic nature of research, it is envisaged that the Plan will be revised to address some issues that may emerge in the course of implementing this Strategic Plan.

3.2. Structure of the strategic plan

This Strategic Plan comprises nine sections. Section one comprises the introduction including background to EAC, IUCEA and VicRes. Section two highlights the strengths, weaknesses, opportunities and threats to VicRes'. Section three summarizes the

achievements and challenges faced by VicRes in Phases 1 and 2. Section four presents the emerging issues considered in the development of this Strategic Plan while section five focuses on VicRes Phase 3 and its vision, mission, goal, objectives and values. Section six provides details of the Strategic Plan in three key strategies to be pursued in VicRes Phase 3 including activities, objectives, outputs and outcomes. In section seven, details of Monitoring and Evaluation of VicRes' activities are presented. Section eight dwells on mechanisms of financing the strategic plan and the logframes are given in section nine.

3.4. Methodology

The development of this Strategic Plan began with a study of the research landscape in the East Africa region, referred to as Research Audit, to document research activities being undertaken by other regional research programmes and how they compare with VicRes research activities in the six thematic areas of Phases 1 and 2. Discussions and consultative meetings were also held with key stakeholders (individuals and institutions involved in research) in the region. The findings together with other information collected through desk review were used to prepare the first draft of the Strategic Plan that was presented and discussed at the first Results-Based Management (RBM) workshop that was held in November 2009 in Jinja, Uganda. The second draft that benefited from the first RBM workshop was presented and discussed at the second RBM workshop that was held in June in Kigali, Rwanda. **Meeting of the Scientific Advisory Committee that was held in November 2010 and the Agreement Partners in December 2010 reviewed and approved the Plan.**

3.5. Vision and Mission

As a regional multidisciplinary-collaborative research programme of the IUCEA, VicRes' Vision and Mission are consistent with and contributes to the achievement of the IUCEA's mission and strategic objectives. All these are centered on a common interest of ensuring optimal and sustainable utilization of natural resources, governance of trans-boundary resources and poverty alleviation in the region.

3.6. The Vision

VicRes becomes East Africa's leading regional research initiative contributing to the knowledge economy and improved livelihoods in the Lake Victoria Basin and beyond.

3.7. The Mission

VicRes shall coordinate and promote regional research of high scientific quality, facilitate research networking and capacity development and use in the East African Universities and research institutions for sustainable natural resource management and benefit to communities in the Lake Victoria Basin and beyond.

3.8. The Goal

To promote development cooperation of the East African Community Partner States through collaborative research on transboundary resources in the region.

3.9. The objectives

- a. To reactivate and strengthen capacity building and use, networking and collaborative regional research in universities and research institutions in the East African Community Partner States.
- b. To promote sustainable natural resources governance and improved livelihoods in the Lake Victoria Basin
- c. To promote access to research findings by stakeholders in and outside the East African region for effective decision-making, policy implementation and development planning.

3.10. Core values

- i. Equity – ensuring equal opportunity in terms of gender, age, regional balance and representation of disciplines in accessing funding support.
- ii. Transparency – honesty and open communication in sharing resources, knowledge and experiences.
- iii. Accountability – ensuring value for money.
- iv. Respect for each other.
- v. Ethics and integrity – respect for the rights of stakeholders and Intellectual Property.

4.0. ACHIEVEMENTS AND CHALLENGES OF VICRES PHASES 1 AND 2

4.1. Achievements of VicRes Phases 1 and 2

VicRes' achievements in Phases 1 and 2 include the following:

i. Generation of and increased access to scientific knowledge for sustainable management and use of natural resources in the LVB.

Considerable amount of new information has been generated and has contributed to the existing body of scientific knowledge on Lake Victoria and the basin. For example, 15 projects on biotechnological innovations and value addition were initiated and implemented at community level. The information is available to aid decision making and development planning.

ii. Human resource capacity building and use

Capacity of a considerable number of researchers from the EAC Partner States' institutions has been built through attachment to and supervision by senior researchers. The young researchers are engaged in different types of research related activities in their respective institutions.

iii. Provision of research support facilities

Researchers received equipment and research facilities as part of VicRes funding support. For instance, each researcher received lap top computer, digital camera, laboratory equipment and consumables.

iv. Reactivation and promotion of research

Ninety six projects have been funded since 2003 and in effect helped to reactivate and promote research activities in the participating institutions in the region.

v. Networking and collaboration

Nearly 500 researchers from different institutions in the Partner States had the opportunity to meet and interact with each other through cluster workshops and annual forum.

vi. Dissemination and information sharing

Over 40 VicRes researchers have been supported to conferences and workshops within and outside the region to present their findings and share information and experiences with other researchers. In addition, over 100 papers have been published.

vii. Cutting edge innovations

VicRes supported research has resulted into development of technologies and innovations that have greatly contributed to the environment conservation and poverty alleviation. For instance the isolation of ant-malarial active compounds from *Toddalia asiatica*, development and use of solar drier technology for processing herbal medicine, production of all male tilapia using heat treatment techniques and many others.

4.2. Challenges encountered in VicRes Phases 1 and 2

During the implementation VicRes Phases 1 and 2, a number of challenges were encountered that include the following:

- i. Delays in accessing funds and obtaining certified copies of accountability documents by researchers from their host institutions. Such delays had a ripple effect on implementation of research activities within the planned time frame.
- ii. Low scientific quality of some research outputs.
- iii. Inadequate staffing and low capacity at the secretariat to manage the 96 research projects involving over 450 researchers.
- iv. Sustainability of the programme due to reliance on one source of funding.

5.0. EMERGING ISSUES CONSIDERED IN THE DEVELOPMENT OF THE STRATEGIC PLAN

The following issues emerged from the VicRes research experiences in Phases 1 and 2:

i) Need for high scientific quality, innovation and product development from research results

VicRes research outputs are expected to be of high scientific quality and should result in innovations that can be transformed into prototypes and commercial products. This expectation is premised on the fact that VicRes research can contribute to poverty

reduction meaningfully if there are products of commercial value resulting from the research outputs. Although this expectation may not be realized in the short term, VicRes programme could provide a start in that direction. In VicRes Phase 3, special emphasis is put on enhancing quality of scientific research and strengthening links between research, development and policy. In order to achieve these, adequate capacity, time and resources will be required.

ii) Consolidation and re-focusing of research themes

The research themes have been reduced from six in Phases 1 and 2 to two in Phase 3. This has been done to minimize duplication of similar research being undertaken by other research initiatives in the region, provide opportunity for synergy and concentrate resources on few and large but well focused projects of high scientific quality. The research sub-themes are (1) Fisheries and Aquaculture and (2) Natural Resource Governance.

iii) Trans-boundary natural resources governance

VicRes research addresses trans-boundary resources governance and adaptation to climate change impacts in Lake Victoria Basin and the East African region. Since most resources and ecosystems are shared, their management requires a collaborative cross-border approach. Research projects address socio-economic and cultural challenges related to human population pressure, environment and land degradation, food security, management of trans-boundary resources and poverty alleviation. The trans-boundary nature of the ecosystems, the socio-cultural and economic interrelations and the regional political and economic integration provide the impetus for applying integrated and inter-disciplinary research approaches.

iv) Climate change issues: Climate change impacts are being experienced in many ways in the Lake Victoria Basin and the East African region such as declining levels in water bodies, loss of aquatic and terrestrial diversity, unreliable rains, frequent floods, and droughts among others. Climate change adaptation studies are designated to 2010 call for proposals under the main theme ‘Climate change adaptation in the Lake Victoria Basin’ and sub-themes (1) Fisheries and Aquaculture and (2) Natural Resource Governance.

v) Resource Mobilizing and Sustainability of VicRes: Additional sources of funds shall be sought to broaden the financial base for VicRes. Support is expected from the East African Community through IUCEA annual budget, other development partners and subscription from IUCEA member universities. Additional support shall be obtained through partnership with LVBC and other regional programmes. These sources of support will ensure the sustainability of VicRes beyond the current funding phase (January 2009 to June 2014).

vi) Increasing the level of participation by researches in Rwanda and Burundi: the level of participation by researchers in Rwanda and Burundi in VicRes’ activities shall be increased through continuous sensitization seminars targeting institutions in

the two Partner States. An affirmative approach in which researchers from the two Partner States are included in all proposals submitted for funding in VicRes shall be pursued. In order to increase research capacity in the two Partner States, the central focus shall involve training of young and inclusion of female researchers.

vii) **Building partnerships between Research Institutions, Government and Private Sector**

These shall be developed in order to facilitate transformation of research outputs into products of commercial and industrial value referred to in (i) above. A public-private-partnership (PPP) framework shall be developed and used to achieve this strategy. The framework shall take into consideration the intellectual property rights.

vii) **Strengthening Collaboration and Networking among Researchers**

The current research arrangement has permitted collaboration and networking among researchers in the five Partner States. Details of strategies for collaboration and networking are indicated in section (xxx)

viii) **Enhance Demand-Driven And Policy Oriented Research:** This shall be achieved by:

- a. Creating platforms that link researchers to policy makers to increase understanding and application of research findings in decision making.
- b. Involving beneficiary communities and institutions in research design, data collection and dissemination of findings.
- c. Addressing priority problems that are specific to Partner States.

6.0. STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS OF VICRES

This section provides a summary of the major Strengths, Weaknesses, Opportunities and Threats (SWOT). The SWOT analysis revealed key strategic issues addressed in this strategic plan.

6.1. STRENGTHS

Coordination

- Strengthened regional coordination secretariat
- Functional cluster leadership
- Functional Advisory committee

Infrastructure

- Good IT infrastructure
- Adequate office space

Networking and collaboration

- Seventy participating universities and research institutions
- Five hundred researchers within the region
- Partnerships with LVBC, LVFO, LVRLAC
- Bringing together researchers of different disciplines

Dissemination

- Annual cluster workshops
- Bi-annual forum
- Participation in conferences and exhibitions
- Publication of annual reports, newsletters and cluster proceedings
- VicRes website

Research capacity building

- Ninety six research projects funded
- Young researchers trained at masters and PhD levels
- Computers and laboratory equipments provided to participating institutions and researchers

Weaknesses

Scientific quality

- Few patentable products
- Few scientific publications

Knowledge of the research landscape

- Inadequate knowledge of similar studies already funded elsewhere in the region

Research identity

- Lack of research focus to identify VicRes with

Research team work

- Poor coordination among researchers

Intellectual Property Rights (IPR)

- Lack of Intellectual Property Rights (IPR) Policy

Research funds

- Single funding source
- Small grants that do not permit high scientific research
- Small grants that do not permit transformation of research outputs into commercial products
- Small grants that do not permit tangible impacts at grassroots level

Reporting and accountability

- Delays by researchers in submitting timely technical and financial reports

Monitoring and Evaluation

- Large numbers of projects do not permit on the spot visitation annually

Strategic planning

- Implementation of Phases 1 and 2 without a strategic plan

6.2. OPPORTUNITIES

Higher education and research institutions

Expanding number of universities and researchers within the region

Growing number of research and graduate programmes in universities

Research facilities

Existing research infrastructure in universities and research institutions

Networking and collaboration

Existing academic programmes organized by IUCEA

Synergy in research opportunities available in EAC institutions such as LVBC

Sida's support to other initiatives in the region

The political good will among the EAC Partner States

Dissemination

The IUCEA member universities provide outlet for information dissemination and sharing

Existence of functional civil society organizations in the region

The political good will among the EAC Partner States

6.3. THREATS

Sustainability

The current single source of funding support

Brain drain

Movement of researchers to opportunities outside the region

Financial regulations

Inconsistency in rules and regulations governing financial management and accountability in participating institutions and those IUCEA

6.4. THE STRATEGIES

VicRes shall, through implementation of this strategic plan for 2010 – 2014, pursue the following strategies:

1. Rationalization and Consolidation of Research
2. Research Network, Capacity Building and Use
3. Resource Mobilization

The guiding principles in the implementation of this strategic plan are:

- 1) Promotion of research network among EAC researchers and research institutions.
- 2) Developing sustainable human and institutional capacity for research in the region.
- 3) Developing centres of excellence in innovation and technology development for socio-economic transformation and environmental sustainability in the Lake Victoria Basin.
- 4) Contributing to regional and global efforts in addressing challenges such as climate change, trans-boundary resource governance and poverty.
- 5) Enhancing aspirations for attainment of knowledge-based economy in the region.
- 6) Contributing to regional development cooperation through research.

The successful implementation of the proposed priority strategies and actions is based on the following assumptions:

- 1) The vision of EAC and IUCEA shall not change fundamentally.
- 2) VicRes shall contribute significantly to the development cooperation of the EAC Partner States.
- 3) Sida shall continue to support VicRes until it can secure reliable and sustainable long-term funding.
- 4) The Governments of the EAC Partner States shall provide conducive and adequate funding of research in the region.

7.0. STRATEGIC OBJECTIVES, ACTIONS, EXPECTED OUTPUTS AND OUTCOMES

7.1. STRATEGY 1: RATIONALIZATION AND CONSOLIDATION OF RESEARCH

Overall objective of Strategy 1

To rationalize, consolidate and increase the use of research findings and scientific innovations on Climate Change Adaptation, Value Addition and Product Development for improved livelihood in the Lake Victoria Basin.

Specific objectives of strategy 1

- i. To rationalize and consolidate VicRes research focus
- ii. To support research on Climate Change Adaptation, Value Addition and Product Development for senior researchers.
- iii. To support research and short-term attachments for junior researchers.

Sub-theme 1: Natural Resources Governance

Specific objectives

- iv. To improve water management and conservation for communities in LVB for domestic use and agricultural production.
- v. To adopt sustainable crop production methods and technologies for increased productivity.
- vi. To adopt alternative technologies for sustainable and efficient energy utilization.
- vii. To reduce effects of climatic change/variability of botanical resources in LVB.
To disseminate information on Natural Resources Governance

Sub-theme 2: Fisheries and Aquaculture

Specific objectives

- viii. To increase fish production through aquaculture in Lake Victoria Basin.
- ix. To increase the quantity and quality of fish stocks in lakes and rivers in Lake Victoria Basin.
- x. To enhance policy on sustainable fish production and utilization in LVB
- xi. To disseminate information on improved Fisheries and Aquaculture Technologies and Cage farming in LVB.

7.1.1. STRATEGIC ACTIONS

Strategy 1: Rationalization and Consolidation of Research

- Create research themes
- Re-organize research themes from six to two sub-themes
- Create senior and junior researchers' platforms.
- Senior researchers undertake research on Climate Change Adaptation and Value Addition and Product Development.
- Support research and short-term attachments for junior researchers.
- Publish two calls for research proposals on Climate Change Adaptation in the Lake Victoria Basin in 2010 and Value Addition and Product Development in 2012
- Fund research proposals on Fisheries and Aquaculture and Natural Resource Governance from senior researchers.
- Research undertaken on further development of prototypes, technologies and innovations.

Sub-theme 1: Natural Resources Governance

- Undertake research on
 - Integrated Water Resources Management (IWRM) in Lake Victoria basin.
 - Production and utilization of alternative energy sources
 - To improve productivity of biological resources and develop technologies for improvement of varieties.
 - Domestication of indigenous plants
 - Adaptation of indigenous plants to climate change/variability.
 - Adaptation and coping strategies of communities to climate change/variability
 - value chain analysis of natural products
- Produce and distribute pamphlets and policy briefs on IWRM, alternative energy sources production and utilization and botanicals
- Hold dissemination meetings with local communities in LVB.

Sub-theme 2: Fisheries and Aquaculture

- Undertake research to:
 - inform policy on sustainable fish production and utilization in LVB.
 - improve fish feeds.
 - improve fish seed.
 - improve aquaculture technologies and cage farming to increase fish survival and production.
 - develop technologies for improved post-harvest fish handling.
 - inform policy on sustainable fish production and utilization in LVB.
- Undertake research on domestic/commercial farming of new fish species
- Hold policy dialogues to:
 - promote implementation of policies on sustainable fish production and utilization in LVB
 - promote implementation of policies on sustainable fish production and utilization in LVB
- Hold dissemination meetings with stakeholders in LVB.
- Produce and distribute publications on improved Fisheries and Aquaculture Technologies and Cage farming

7.1.2. EXPECTED OUTPUTS

Strategy 1: Rationalization and Consolidation of Research

- Climate Change Adaptation in Lake Victoria basin research theme created
- Value Addition and Product Development research theme created
- Natural Resources Governance research sub-theme created
- Fisheries and Aquaculture research sub-theme created
- Senior and junior researchers platforms created
- Reports from senior researchers

- Reports from junior researchers
- Policy recommendations for public investments in research
- Research results indicating commercialisable products
- Prototypes.
- Patent certificates.
- Publications.

Sub-theme 1: Natural Resources Governance

- Research results on:
 - o Domestication of indigenous plants.
 - o Adaptation of indigenous plants to climate change.
 - o Adaptation and coping strategies of communities to climate change/variability
 - o Value addition
- Number of studies undertaken on Integrated Water Resources Management (IWRM)
- Published pamphlets and policy briefs on IWRM and alternative sources of energy
- Number of dissemination meetings/ seminars/workshops research findings
- Pamphlets and policy briefs on effluent discharge and water quality.
- Results on:
 - o Effluent discharge management
 - o Improved productivity of biological resources and varieties adaptable to climate change/variability.
 - o Domestication of indigenous plants.
 - o Adaptation of indigenous plants to climate change.
 - o Adaptation and coping strategies of communities to climate change/variability
- Publications and policy briefs on IWRM, alternative energy sources production and utilization and botanicals
- Dissemination meetings/ seminars/workshops
-

Sub-theme 2: Fisheries and Aquaculture

- Results on:
 - o improved fish feeds.
 - o domestic/commercial farming of new fish species.
 - o aquaculture technologies to increase fish survival and production improved and developed.
 - o technologies for improved post-harvest fish handling.
 - o fish utilization trends
 - o improved and sustainable fish stock management.
 - o improved fish seed.
 - o improved aquaculture technologies and cage farming
- Policy recommendations for sustainable fish production and utilization.
- Policy dialogue reports

- Pamphlets and policy briefs on improved Fisheries and Aquaculture Technologies and Cage farming
- Reports and/or minutes of dissemination meetings

7.1.3. OUTCOMES

Strategy 1: Rationalization and Consolidation of Research

- Re-orientation of VicRes research to Climate Change Adaptation, Value Addition and Product Development
- VicRes research undertaken on Natural Resources Governance and Fisheries and Aquaculture
- VicRes research re-organize from six themes to two sub-themes
- Increased adaptability of fisheries and natural resources to climate change in the Lake Victoria Basin
- Transformation of research outputs into commercial and industrial products
- Increased number of innovations for product development.
- Increased number of quality publications

Sub-theme 1: Natural Resources Governance

- Increased:
 - involvement of LVB communities in water management and conservation for agricultural production, domestic and industrial use.
 - production and use of alternative energy sources
 - domestication of indigenous plants.
 - durability to products
 - production of indigenous plants adapted to climate change.
 - awareness and application of IWRM, alternative energy sources, sustainable production, management and utilization of botanicals
 - production and use of botanicals which are adapted to climate change
 - adaptability of species to climate change and variability
- Reduced:
 - Loss of botanical species
 - Vulnerability of communities to climate change
- Improved:
 - Livelihoods (economic and health)
 - Quality of products
 - Productivity of a variety of botanical resources adaptable to climate change.
 - Water management and use

Sub-theme 2: Fisheries and Aquaculture

- Increased fish production through aquaculture in the Lake Victoria Basin.
- Increased quantity and quality of fish stocks in lakes and rivers in the Lake Victoria Basin.

- Sustainable fish production and utilization in LVB
- Quality and quantity of fish feed available and used by fish farmers.
- Quality fish seed available and used by the fish farmers.
- Commercial farming of new domesticated fish species.
- Increased fish yield from the improved aquaculture technologies and cage farming.
- Increased fish survival.
- Reduced post-harvest losses and increased shelf-life.
- Improved fish quality put on the market.
- Sustainable fish production and utilization in LVB.
- Increased awareness and adoption of improved Fisheries and Aquaculture Technologies and Cage farming
- Change in attitudes towards adoption of improved Fisheries and Aquaculture Technologies and Cage farming

7.2. STRATEGY 2: RESEARCH NETWORK, CAPACITY BUILDING AND USE

Overall objective of Strategy 2

To increase the level of networking, capacity building and use among researchers, universities and research institutions in the region.

Specific objectives of strategy 2

- i. To establish a functional network that undertakes research on climate change adaptation, value addition and product development.
- ii. To establish a functional network that undertakes research on trans-boundary natural resources governance and fisheries and aquaculture.
- iii. To promote equitable participation of researchers in the Partner States in VicRes.
- iv. To strengthen research capacity and use in the East Africa region for high quality scientific research.

7.2.1. STRATEGIC ACTIONS

- i. Hold regional network fora, seminars, public lectures, meetings
- ii. Visitation to participating universities and institutions
- iii. Production and distribution of network publicity materials.
- iv. Establishment of network website.
- v. Formation of research teams comprising researchers from Partner States.
- vi. Establish one functional centers of excellence in each Partner States.
- vii. Build a gender-balanced capacity and use in research.

7.2.2. OUTPUTS

- i. Report of network fora, seminars, public lectures, meetings.
- ii. Regional networking guidelines

- iii. Formation of visitation committees and teams.
- iv. Publicity materials.
- v. A functional website.
- vi. Gender balanced and multidisciplinary research teams.
- vii. 5 centers of excellence established.
- viii. Increased number of male and female researchers trained at Masters and Doctorate levels in Partner States.
- ix. Reports on short training courses in proposal writing, scientific writing skills and research management.
- x. Increased participation of male and female researchers in conferences, workshops and seminars.

7.2.3. OUTCOMES

- i. Agreement on strategic plan to guide activities of a regional research network.
- ii. Networking systematically guided
- iii. Increased networking and coordination among universities and research institutions in the East Africa region.
- iv. Increased collaboration in research activities.
- v. Increased information flow among network institutions.
- vi. Agreement on strategic plan to guide activities of a regional research network.
- vii. Equitable participation of researchers from the Partner States.

7.3. STRATEGY 3 – RESOURCE MOBILIZATION

Overall objective Strategy 3

To put in place and implement mechanisms for securing funds to sustain VicRes.

Specific objectives of strategy 3

- i. To broaden the VicRes' financial resource base.
- ii. To establish mechanisms for creating and managing VicRes' endowment fund.

7.3.1. STRATEGIC ACTIONS

- i. Write proposals to support funding requests.
- ii. Development partners consultative meeting.
- iii. Develop policy for VicRes' endowment fund.

7.3.2. OUTPUTS

- i. Proposals to support funding requests.
- ii. Reports of development partners' consultative meetings.

- iii. VicRes' endowment fund policy.

7.3.3. OUTCOMES

- i. VicRes' funding sources diversified.
- ii. VicRes exposed to other potential development partners.
- iii. VicRes' endowment fund created and managed.
- iv. Policy guided VicRes' endowment fund operational.

8.0. IMPLEMENTATION PLAN

Implementation of the VicRes Strategic Plan will be the responsibility of IUCEA Management through the VicRes Secretariat. The Executive Secretary shall delegate coordination of the activities related to the implementation of this strategic plan to the VicRes Secretariat. The annual work plans from 2010 - 2014 of VicRes shall be developed from the activities provided in this strategic plan. The mid-year and annual technical and financial report shall indicate the extent to which the activities in this strategic plan have been implemented.

9.0. MONITORING AND EVALUATION

9.1. Monitoring

Monitoring of the implementation of this strategic plan shall be the overall responsibility of the IUCEA that shall periodically audit the implementation of the plan. Monitoring of the activities provided in this strategic plan shall be the responsibility of the VicRes Secretariat. Monitoring framework shall be developed comprising tools, time, reporting schedule and feedback mechanism.

Monitoring tools shall comprise electronic and field-based instruments such as structured questionnaire for data collection. Electronic monitoring shall be a continuous process covering the period of annual work plan, while field monitoring shall be undertaken once a year. Monitoring shall be incorporated in the VicRes' annual work plan that is approved by the Agreement Partners during the annual review meeting held early in the year.

Monitoring reports shall form part of the mid-year and annual reports of VicRes. The reports and the feedback therefrom shall be shared with the Agreement Partners and the IUCEA Governing Council.

9.2. Evaluation

This strategic plan shall be subjected to internal evaluation after a period of two and a half years (Mid-2012) and to external evaluation at the end of 2014. The Agreement Partners in conjunction with the VicRes secretariat shall develop the Terms of Reference (ToR) for both evaluations. The evaluation reports shall be shared with the IUCEA Governing Council.

10.0. Review and rolling of VicRes Strategic Plan

This strategic plan shall be reviewed after two and a half years as indicated above. The recommendations of the review shall guide the implementation of the activities in the second half of the strategic plan.

11.0. Financing of the Strategic Plan

Funds to support the implementation of activities in this strategic plan whose duration coincides with the period of VicRes Phase 3 shall be largely from Sida. However, additional funding support shall be explored from other sources using the resource mobilization strategy provided in this strategic plan. The VicRes annual budget shall be developed in accordance with the strategies for implementation of activities in this strategic plan. The annual budget will be discussed and approved at the VicRes' Annual Review Meeting.

12.0. VicRes' Results-Based Management Logframe

The detailed logframes of the VicRes strategies to be pursued within the timeframe of this strategic plan are presented below.

Results-Based Management Logframes for the period 2010-2014

Strategy 1: Rationalization and Consolidation of Research

Strategic Objective: To rationalize, consolidate and increase the use of research findings and scientific innovations on Climate Change Adaptation, Value Addition and Product Development for improved livelihood in the Lake Victoria Basin.

Activities	Outputs	Outcome	Performance Indicator of Outcome	Data Source	Data Collection Method	Assumptions
Specific objective 1: To rationalize and consolidate VicRes research focus Outcomes: Two Research themes and two sub-themes						
Create research themes	(i) Climate Change Adaptation in Lake Victoria basin (ii) Value Addition and Product Development	Re-orientation of VicRes research to Climate Change Adaptation, Value Addition and Product Development	Number of projects addressing Climate Change Adaptation, Value Addition and Product Development	Research reports	Content analysis	Researchers positive response to the themes
Re-organize research themes from six to two sub-themes	(i) Natural Resources Governance (ii) Fisheries and Aquaculture	VicRes research undertaken on Natural Resources Governance and Fisheries and Aquaculture sub-themes	Number of project in Natural Resources Governance and Fisheries and Aquaculture	Research reports	Content analysis	Researchers positive response to the sub themes
Specific objective 2: To support research on Climate Change Adaptation, Value Addition and Product Development for senior researchers. Outcomes: (i) Increased adaptability of fisheries and natural resources to climate change in the Lake Victoria Basin (ii) Transformation of research outputs into commercial and industrial products						
Create junior researchers' platform.	Junior researchers platform	Increased access to funds by Junior researchers for research and attachments	Number of participating junior researchers	Research reports	Content analysis	Positive response by junior researchers
Senior researchers undertake research on Climate Change Adaptation and Value Addition and Product Development.	Research results indicating commercialisable products	Research results transformed into commercial products	Number of commercial products	Research reports	Content analysis	High quality research output that can be commercialized
Support research and short-term attachments for junior researchers.	Research and attachment reports	Enhanced research capacity	Number of publications and research grants won	Research and survey reports	Content analysis and survey	Positive response by junior researchers
Publish two calls for research proposals on Climate Change Adaptation in the Lake Victoria Basin in 2010 and Value Addition and Product Development in 2012	Two calls for proposals	Increased number of funded project on Climate Change Adaptation and Value Addition and Product Development	Number of projects funded on Climate Change Adaptation Value Addition and Product Development	Secretariat reports	Content analysis	Positive response by senior researchers
Fund research proposals on Fisheries and Aquaculture and Natural Resource Governance from senior researchers.	-Research reports -Number of innovations -Number of commercialisable research products	Research results transformed into prototypes and commercialisable products	Number of prototypes, innovations and commercialisable products	Patent records Research reports	Content analysis and survey	Researchers and private sector firms work together

Specific objective 3: To establish institutional framework for transformation of research outputs into commercial products Outcomes: (i) Existence of functional framework for transformation of research outputs into commercial products (ii) Transformation of research outputs into commercial products						
Establish Institution framework for transformation of research outputs into commercial products	Research-Private Sector Partnership (RPSP) framework	Enhanced partnership between research and private sector in product development	Number of RPSP agreements	Secretariat records	Content analysis	Researchers and private sector willing enter into partnerships
Produce Intellectual Property Rights (IPR) Policy	VicRes IPR Policy	Willingness by researchers to commercialize research outputs	Number of patents, prototypes and products	Patents office Secretariat records	Content analysis	Research outputs are patentable and commercialisable
Establish Intellectual Property (IP) nodes/committees in each Partner State to handle IP of VicRes researchers.	<ul style="list-style-type: none"> IP node/committee in each Partner State. 	<ul style="list-style-type: none"> VicRes IP matters handled at country level. Technologies and innovations protected. 	<ul style="list-style-type: none"> Number of technologies and innovations protected. Number of patents/patent applications. 	IP records and minutes of IP nodal/committee meetings.	Content analysis of IP records and committee minutes.	Researchers are willing to patent and commercialize their research outputs.

Sub-theme 1: Natural Resource Governance

Sub-theme Objective: To increase research on climate change adaptation and improve the livelihood of communities in LVB through good governance of natural resources.

Activities	Outputs	Outcomes	Performance Indicator of Outcome	Data Source	Data Collection Method	Assumptions
Specific Objective 1: To improve water management and conservation for communities in LVB for agricultural production, domestic and industrial use. Outcome: Improved water management and conservation for communities in LVB for agricultural production, domestic and industrial use.						
Undertake research on Integrated Water Resources Management (IWRM) in Lake Victoria basin.	<ul style="list-style-type: none"> Number of studies undertaken in the area of IWRM Research reports Peer reviewed articles 	<ul style="list-style-type: none"> Increased involvement of LVB communities in water management and conservation for agricultural production, domestic and industrial use. 	-Number of institutions, community-based organizations and individuals involved in IWRM	<ul style="list-style-type: none"> Water Resources departments' records. Irrigation Departments records. Research reports on IWRM. 	Content analysis and survey	<ul style="list-style-type: none"> Enabling policies and laws in the Partner States. Human Resource capacity exists Willingness of institutions, community-based organizations and individuals involved in IWRM
Specific objective 2: To adopt alternative technologies for sustainable and efficient energy utilization. Outcome: Alternative technologies for sustainable energy production and utilization developed and adopted						
Undertake research on production and utilization of alternative energy sources	<ul style="list-style-type: none"> Results on production and utilization of alternative sources of energy Reports on production and utilization of alternative sources of energy 	<ul style="list-style-type: none"> Increased production and use of alternative energy sources 	•Number of households using alternative energy	<ul style="list-style-type: none"> Feedback survey Research reports 	Content analysis and feedback survey	<ul style="list-style-type: none"> Enabling policies and laws in the Partner States. Human Resource capacity exists Willingness of

Activities	Outputs	Outcomes	Performance Indicator of Outcome	Data Source	Data Collection Method	Assumptions
Specific objective 3: To reduce effects of climatic change/variability of botanical resources in LVB. Outcomes: (i) Higher productivity of botanical resources adaptable to climate change. (ii) Reduced loss of species and increased adaptability of species to climate change and variability						
Undertake research to improve productivity of biological resources and develop technologies for improvement of varieties.	Research findings on improved productivity of biological resources and varieties adaptable to climate change/variability.	Reduce loss of species Increase adaptability of species to climate change and variability Higher productivity of a variety of botanical resources adaptable to climate change.	Number of botanical resource varieties that are adaptable to climate change developed and widely in use.	Research reports.	- Content analysis of research reports.	
Undertake research on domestication of indigenous plants.	Research results on domestication of indigenous plants.	Increased domestication of indigenous plants.	<ul style="list-style-type: none"> Number of indigenous plants domesticated. At least 10% of the households domesticating indigenous plants 	Agricultural production records.	- Trend analysis of data and records.	- Do -
Undertake research on adaptation of indigenous plants to climate change/variability.	Research results on adaptation of indigenous plants to climate change.	Increased production of indigenous plants adapted to climate change.	Number of indigenous plants adapted to climate change being cultivated.	Agricultural production records.	- Trend analysis of data and records.	- Do -
Undertake research on adaptation and coping strategies of communities to climate change/variability	Research results on adaptation and coping strategies of communities to climate change/variability	Reduced vulnerability of communities to climate change			-	
Undertake research on value chain analysis of natural products Undertake research on value addition to natural products	Research results on value addition	Increased durability to products Improved livelihoods (economic and health) Improved quality of products			-	
Specific objective 4: To disseminate information on Natural Resources Governance Outcome: increased awareness and knowledge about Natural Resources Governance in LVB						
Produce and distribute	• Publications and policy briefs	• Increased awareness and	• Number of pamphlets	• Water offices, energy	Content analysis	Enabling policies and

Activities	Outputs	Outcomes	Performance Indicator of Outcome	Data Source	Data Collection Method	Assumptions
pamphlets and policy briefs on IWRM, alternative energy sources, sustainable production, management and utilization of botanicals	on IWRM, alternative energy sources, sustainable production, management and utilization of botanicals	application of IWRM, alternative energy sources, sustainable production, management and utilization of botanicals	and policy briefs. •	ministries, state of environment reports and agriculture department, and museums .	and feedback survey.	laws
Hold dissemination meetings with local communities in LVB.	• Dissemination meetings/ seminars/workshops	<ul style="list-style-type: none"> Improved water management and use Increased production and use of alternative energy Increased production and use of botanicals adapted to climate change 	• Number of meetings held.	• Reports of meetings	Content analysis and feedback survey	Enabling policies and laws

Sub-theme 2: Fisheries and Aquaculture

Sub-theme objective: To increase fish production and utilization in Lake Victoria Basin.

Activities	Outputs	Outcome	Performance Indicator of Outcome	Data Source	Data Collection Method	Assumptions
Specific objective 1: To increase fish production through aquaculture in Lake Victoria Basin. Outcome: Increased fish production through aquaculture in the Lake Victoria Basin.						
Undertake research to improve fish feeds.	Research results indicating improved fish feeds.	Quality and quantity of fish feed available and used by fish farmers.	<ul style="list-style-type: none"> Number of companies making fish feeds. Quantity (tonnage) of fish feed. Number of farmers using fish feed. 	<ul style="list-style-type: none"> Research reports on improved fish feed. Fisheries department 	Content analysis, surveys.	<ul style="list-style-type: none"> Appropriate infrastructure and human capacity are available. Fish farmers willing to use improved fish feeds.
Undertake research to improve fish seed.	Research results indicating improved fish seed.	Quality fish seed available and used by the fish farmers.	<ul style="list-style-type: none"> Number of hatcheries producing fish seed. Quantity (tonnage) of fish seed. Number of farmers using fish seed. 	Reports and publications on improved fish seed.	Trend analysis of data and records.	<ul style="list-style-type: none"> Aquaculture grows and continues to be practiced in the Lake Victoria basin
Undertake research on domestic/commercial farming of new fish species.	Research results indicating domestic/commercial farming of new fish species.	Commercial farming of new domesticated fish species.	<ul style="list-style-type: none"> Number of farmers piloting the new fish species. Commercial value of the new fish species farmed. 	Reports and publications on domestic/commercial farming of the new fish species.	Content analysis and Surveys.	<ul style="list-style-type: none"> The new fish species will be adaptable to aquaculture in LVB

Activities	Outputs	Outcome	Performance Indicator of Outcome	Data Source	Data Collection Method	Assumptions
						<ul style="list-style-type: none"> • Farmers willing to adopt new fish species
Undertake research to improve aquaculture technologies and cage farming to increase fish survival and production.	<p>Research findings indicating improved aquaculture technologies and cage farming</p> <p>Research findings indicating increased fish survival and production.</p>	<p>-Farmers applying improved aquaculture technologies and cage farming in fish production.</p> <p>-Increased fish yield from the improved aquaculture technologies and cage farming.</p> <p>-Increased fish survival.</p>	<ul style="list-style-type: none"> •Number of aquaculture technologies improved. •Number of fish farmers applying the improved aquaculture technologies and cage farming. •Quantity of fish harvested •Number of fish surviving 	<ul style="list-style-type: none"> • Farm records • Research reports and publications on aquaculture technologies developed. • Fisheries departments records 	Content analysis and Surveys.	Farmers are willing to adopt improved aquaculture technologies and cage farming
<p>Specific objective 2: To increase the quantity and quality of fish stocks in lakes and rivers in Lake Victoria Basin.</p> <p>Outcome: Increased quantity and quality of fish stocks in lakes and rivers in the Lake Victoria Basin.</p>						
Undertake research to develop technologies for improved post-harvest fish handling.	Research findings indicating technologies for improved post-harvest fish handling.	<p>Post-harvest losses reduced</p> <p>Increased shelf-life.</p> <p>Improved fish quality put on the market.</p>	<ul style="list-style-type: none"> •Number of fish farmers reporting reduction in post-harvest losses. •Number of fish dealers and consumers reporting reduced fish contamination. •Number of fish processing facilities applying the technologies. •No of fisher folks using improved post-harvest fish handling technologies. 	<ul style="list-style-type: none"> •Fish statistical records. •Records / reports on post-harvest and fish preservation 	Content analysis, surveys	<ul style="list-style-type: none"> • Cooperation from the fisher folks • Appropriate transport and storage infrastructure and human capacity are available.
<p>Specific objective 3: To enhance policy on sustainable fish production and utilization in LVB</p> <p>Outcome: Appropriate policy on sustainable fish production and utilization in LVB being implemented</p>						
Undertake research to inform policy on sustainable fish production and utilization in LVB.	Policy recommendations for sustainable fish production and utilization.	Sustainable fish production and utilization in LVB.	<ul style="list-style-type: none"> •Number of policies reviewed and/or developed on sustainable fish production and utilization in LVB 	<ul style="list-style-type: none"> • Fisheries offices. • Policy briefs • Research reports 	<ul style="list-style-type: none"> • Content analysis and surveys. • Fisheries departments records 	<ul style="list-style-type: none"> • Partner States are willing to review and implement revised policies on fish production and utilization
Hold policy dialogues to promote implementation of policies on sustainable fish production and utilization in LVB	Policy dialogue reports	Sustainable fish production and utilization in LVB	<ul style="list-style-type: none"> •Number of dialogue meetings •Number of dialogue reports 	<ul style="list-style-type: none"> • LVBC and Lake Victoria Fisheries Organization (LVFO) • VicRes secretariat records 	Content analysis and consultative meetings.	The partnerships between LVBC, LVFO and VicRes exist and are functional
<p>Specific objective 4: To disseminate information on improved Fisheries and Aquaculture Technologies and Cage farming in LVB.</p> <p>Outcome: Increased awareness and knowledge about improved Fisheries and Aquaculture Technologies and Cage farming in LVB.</p>						

Activities	Outputs	Outcome	Performance Indicator of Outcome	Data Source	Data Collection Method	Assumptions
Produce and distribute publications on improved Fisheries and Aquaculture Technologies and Cage farming	Pamphlets and policy briefs on improved Fisheries and Aquaculture Technologies and Cage farming	Increased awareness and adoption of improved Fisheries and Aquaculture Technologies and Cage farming	<ul style="list-style-type: none"> • Number of pamphlets and policy briefs. • Number of farmers practicing improved Fisheries and Aquaculture Technologies and Cage farming 	<ul style="list-style-type: none"> • Fisheries ministries, departments and research institutes • Farmers organizations • LVBC • LVFO 	Content analysis and feedback survey.	Capacity to produce and distribute the publications exist.
Hold dissemination meetings with stakeholders in LVB.	<ul style="list-style-type: none"> • Reports and/or minutes of dissemination meetings 	<ul style="list-style-type: none"> • Change in attitudes towards adoption of improved Fisheries and Aquaculture Technologies and Cage farming • Increased awareness and knowledge of improved Fisheries and Aquaculture Technologies and Cage farming 	<ul style="list-style-type: none"> • Number of meetings held. 	<ul style="list-style-type: none"> • Fisheries ministries, departments and research institutes • Farmers organizations • LVBC • LVFO 	Content analysis and feedback survey	Willingness of stakeholders to participate in dissemination meetings

Strategy 2 - Research Network, Capacity Building and Use

Strategic Objective: To increase the level of networking, capacity building and use among researchers, universities and research institutions in the region.

Activities	Outputs	Outcome	Performance Indicator of Outcome	Data Source	Data Collection Method	Assumptions
<p>Specific objective 1: To establish a functional network that undertakes research on climate change adaptation, value addition and product development. Outcome: A functional research network that determines the research agendas and address the challenges of climate change adaptation, value addition and product development</p>						
Hold regional network fora, seminars, public lectures, meetings	<ul style="list-style-type: none"> Report of network for a, seminars, public lectures, meetings. Regional networking guidelines 	<ul style="list-style-type: none"> Agreement on strategic plan to guide activities of a regional research network. Networking systematically guided 	<ul style="list-style-type: none"> Number of institutions participating in the regional research network. Networking guidelines 	<ul style="list-style-type: none"> Regional research networks records. Monitoring and Evaluation reports. Periodic secretariat reports. Reports from researchers. Reports of seminars, public lecture, meetings. 	<ul style="list-style-type: none"> Content analysis and survey Enquiry and visiting the VicRes website. 	<p>Institutions in principle agree to network within the framework of the strategic plan and the networking guidelines.</p> <p>Conducive environment exists for networking</p>
Visitation to participating universities and institutions	<ul style="list-style-type: none"> Formation of visitation committees and teams. 	Increased networking and coordination among universities and research institutions in the East Africa region.	<ul style="list-style-type: none"> Number of joint research proposals submitted. Number of jointly funded research proposals. 	<ul style="list-style-type: none"> Visitation reports. VicRes Website. 	Analysis of database.	Participating institutions willing to network.
<ul style="list-style-type: none"> Production and distribution of network publicity materials. Establishment of network website. 	<ul style="list-style-type: none"> Publicity materials. A functional website. 	<ul style="list-style-type: none"> Increased collaboration in research activities. Increased information flow among network institutions. 	Number of publicity materials produced and distributed. Functioning website.	<ul style="list-style-type: none"> Secretariat records Number of VicRes website visits. 	Content analysis and survey.	Networking institutions have IT facilities to access website
<p>Specific objective 2: To establish a functional network that undertakes research on, trans-boundary natural resources governance and Fisheries and Aquaculture in Lake Victoria basin. Outcome: A functional research network that determines the research agendas and address the challenges of trans-boundary natural resources governance and Fisheries and Aquaculture.</p>						
Hold regional network fora, seminars, public lectures, meetings	<ul style="list-style-type: none"> Report of network for a, seminars, public lectures, meetings. Regional networking guidelines 	<ul style="list-style-type: none"> Agreement on strategic plan to guide activities of a regional research network. Networking 	<ul style="list-style-type: none"> Number of institutions participating in the regional research network. Networking 	<ul style="list-style-type: none"> Regional research networks records. Monitoring and Evaluation reports. Periodic secretariat reports. 	<ul style="list-style-type: none"> Content analysis and survey Enquiry and visiting the VicRes website. 	<p>Institutions in principle agree to network within the framework of the strategic plan and the</p>

Activities	Outputs	Outcome	Performance Indicator of Outcome	Data Source	Data Collection Method	Assumptions
		systematically guided	guidelines	<ul style="list-style-type: none"> • Reports from researchers. • Reports of seminars, public lecture, meetings. 		<p>networking guidelines.</p> <p>Conducive environment exists for networking</p>
Visitation to participating universities and institutions	<ul style="list-style-type: none"> • Formation of visitation committees and teams. 	Increased networking and coordination among universities and research institutions in the East Africa region.	<ul style="list-style-type: none"> • Number of joint research proposals submitted. • Number of jointly funded research proposals. 	<ul style="list-style-type: none"> • Visitation reports. • VicRes Website. 	Analysis of database.	Participating institutions willing to network.
<ul style="list-style-type: none"> • Production and distribution of network publicity materials. • Establishment of network website. 	<ul style="list-style-type: none"> • Publicity materials. • A functional website. 	<ul style="list-style-type: none"> • Increased collaboration in research activities. • Increased information flow among network institutions. 	Number of publicity materials produced and distributed. Functioning website.	<ul style="list-style-type: none"> • Secretariat records • Number of VicRes website visits. 	Content analysis and survey.	Networking institutions have IT facilities to access website
<p>Specific objective 3: To promote equitable participation of researchers in the Partner States. Outcome: Equitable participation of member states in VicRes research activities.</p>						
Formation of research teams comprising researchers from Partner States.	Gender balanced and multidisciplinary research teams.	Equitable participation of researchers from the Partner States.	Number of participating researchers from Partner States.	VicRes database and website.	Content analysis and survey	Conducive environment for equitable participation of researchers from Partner States exists.
<p>Specific objective 4: To strengthen research capacity and use in the East Africa region for high quality scientific research. Outcome: Improved capacity of researchers to undertake high quality research in the East Africa region.</p>						
Establish one functional centers of excellence in each Partner States.	5 centers of excellence established.	Researchers in the East Africa region use modern facilities for high quality research.	<ul style="list-style-type: none"> • Number of functional centers of excellence. • Number of researchers visiting centers of excellence 	<ul style="list-style-type: none"> • Websites of centres of excellence. • MoU between institutions utilizing centers of excellence. • Exchange visits reports. • Secretariat reports. 	<ul style="list-style-type: none"> • Content analysis and survey • Website visits. 	Conducive environment for establishment and utilization of centers of excellence exists.
Build a gender-balanced capacity and use in research.	<ul style="list-style-type: none"> • Increased number of male and female researchers trained at Masters and Doctorate levels in 	<ul style="list-style-type: none"> • Increased capacity in research. 	<ul style="list-style-type: none"> • Number of male and female researchers obtaining Masters and 	<ul style="list-style-type: none"> • Records of graduate schools 	<ul style="list-style-type: none"> • Content analysis and survey. 	Conducive environment for the regional

Activities	Outputs	Outcome	Performance Indicator of Outcome	Data Source	Data Collection Method	Assumptions
	Partner States. <ul style="list-style-type: none"> • Reports on short training courses in proposal writing, scientific writing skills and research management. • Increased participation of male and female researchers in conferences, workshops and seminars. 	<ul style="list-style-type: none"> • Researchers with capacity to write competitive proposals, publishable papers and research management. 	PhD. <ul style="list-style-type: none"> • Number of trainees and certificates issued to. • Number of papers published. 	<ul style="list-style-type: none"> • Training reports. • Websites. • Secretariat records. 	<ul style="list-style-type: none"> • Website visits. 	training at Masters, PhD and Short course levels.

Strategy 3 – Resource Mobilisation

Strategic Objective: To put in place and implement mechanisms for securing funds to sustain VicRes.

Activities	Outputs	Outcome	Performance Indicator of Outcome	Data Source	Data Collection Method	Assumptions
Specific objective 1: To broaden the VicRes' Financial resource base Outcome: VicRes' funds emanating from more than one source						
Write proposals to support funding requests	Proposals	Funding sources diversified	Number of funding sources	Secretariat records	Content analysis	Potential donors willing to support VicRes' strategic plan
Development partners consultative meeting	Reports of the consultative meeting	VicRes exposed to other potential development partners	Number of development partners participating on the consultative meeting	Secretariat records	Content analysis	Potential donors willing to support VicRes' strategic plan
Specific objective 2: To Establish Mechanisms for Creating and Managing VicRes' Endowment Fund. Outcome: VicRes' Activities are Sustained with Support of a Functional Endowment Fund.						
Write proposals to support funding requests for establishment of endowment fund.	Proposals	VicRes' endowment fund created.	<ul style="list-style-type: none"> • Amount of contribution to the endowment fund. • Number of contributors to the endowment fund. 	<ul style="list-style-type: none"> • Secretariat records 	Content analysis.	Potential donors willing to contribute to the VicRes' endowment fund
Develop policy for VicRes' endowment fund.	VicRes' endowment fund policy	Policy guided VicRes' endowment fund	<ul style="list-style-type: none"> • Adherence to policy guidelines. 	<ul style="list-style-type: none"> • Secretariat records • Audit reports 	Content analysis.	Policy agreeable to potential contributors
			•	•		•