QUALITY AND RELEVANCE OF UNIVERSITY RESEARCH WITHIN NATIONAL INNOVATION SYSTEMS IN WEST AND CENTRAL AFRICA: THE GOVERNANCE ISSUES

Methodological Guide

Draft

25th March 2011
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INTRODUCTION

It is now widely accepted that universities play important roles in socio-economic development of nations through their three traditional roles of training human resource, producing knowledge through research and extension services to the society. The arrival of a globally competitive knowledge-driven economy, has further underscored the importance of universities and other knowledge institutions in building national capacities for bolstering social, economic, and political progress.

The developed countries have registered much growth, because universities and other knowledge institutions in these countries have been in the forefront of the development process. Countries like South Korea, Malaysia and Thailand which had similar economic situation like Ghana in the 1950s have developed faster due to increasing and sustained development of their national competences in the development, and application of science, technology and innovations developed by universities and other knowledge institutions. The achievements of these countries were made among others, through conducive national policy environment and strong synergies between all actors of the development process.

Recent studies commissioned by the Canadian International Development Research Centre (IDRC) on university research governance reveal that structures for administering, coordinating and promoting research are weak or nonexistent. Invariably, this situation affects the ability of the universities to conduct effective research, which is of good quality and relevant to society.

The University Research Governance Project was conceived to address these issues and contribute towards a better management of university research system. Specifically, it will seek to understand and assess the place and role of the universities in national innovation systems (NIS) in West and Central Africa, and how to foster better linkages with other actors to ensure quality of university research and its relevance to development priorities. Project activities will involve four public and two private universities in the following countries: Burkina Faso, Cameroon, Côte d’Ivoire, Ghana and Senegal. For the public universities, one of them should be specialised in science and technology, while, the private universities should have at least 5 years of existence and offer Master and PhD programs.

The methodology guide offers national research teams a framework for collection and analysing data to produce country reports. The common guide will also assist in producing a regional synthesis report, and compare best practices in the selected universities.

DATA COLLECTION AND ANALYSIS

The research component of the project focuses on three levels namely national, university and knowledge users. These levels are taken into account in these guidelines.
Document Review and Basic Data

The underlying principal of this project is to identify the role universities play in the national innovation system of the participating countries and this is linked to the first tier (National Level) of the project objective. The documentary review should be conducted at two levels; national and university.

The documents of national level include national science, technology and innovation (STI) policies, national development plans, vision documents and Growth and Poverty Strategies (GPRS), and sectoral policies and strategy documents. These documents will help us understand the role granted to research in general, in achieving the development targets of each country. Critical attention should be paid to how the documents seek to tap the knowledge developed within universities to address national development challenges.

The second part is to look for documents that relate to how universities conduct their research activities and how the research address societal needs. Documents to look for are university research policy, strategy plans, research reports and any other relevant reports on university research activities. These documents will complement the national STI policy, development plans, vision documents, GPRS etc. The review of the national and university level documents and other indicators will assist in mapping the role of university in the NIS.

Besides the documentary review, the national teams should collect some data on the country’s socio-economic performance. This includes description of demographic, macroeconomic and social indicators such as Human development index (HDI, HDI ranking), Life expectancy at birth (years), Human poverty index (HPI-1) ranking, percentage of population living below monetary poverty line (USD $2/day), population growth, GDP growth rate, literacy level etc.

In addition, a simplified template has been developed to collect data to map the role of universities in the NIS of the respective countries. Data to be collected include university enrolments figures, university students’ output figures, intellectual property rights held and registered by the universities in the country, proportion of scientists to total population and proportion of engineers to total population among others. The analysis of the secondary data should form part of the introduction to the report to be prepared by the national research teams. The analysis will also give some indications on the critical role the universities play in the national development discourse.

Key Informant Interviews

There will be key informant interviews, which are to complement the documentary review and questionnaire administration. Two sets of interviews are planned. The first one is with policy makers involved in the formulation, implementation and monitoring of the national STI policy, sectoral policies and the various development plans (Ministry of Education, Ministry responsible for Science, Technology and Innovation etc). The purpose of the interview is to seek their perspectives, clarifications and contributions of university research as perceived in the developmental plans. It will also provide better understanding of university/policy makers’ relationships.
The other interview targets the university, mostly the Director/Dean/Deputy Vice Chancellor responsible for research. The other people to be interviewed include researchers, managers of research centres and graduate students, among others. The national research teams are given the liberty to determine the number people to be interviewed in each of the selected universities. The purpose of the interview is to get in depth knowledge about how universities research respond to the national development priorities, perspectives of the university on their role in the NIS. The interview at the policy makers’ level will provide the national research teams an objective assessment of the position of the universities in the NIS. At the university level, the interview will also help the national research teams to gain more insights into research management issues such as organisational structure, resource management and valorisation of research results, among others. Structured guides are provided for the two interviews.

**Administration of Questionnaires**

The questionnaire is to address the institutional (university) level. There will be three levels of questionnaire administration. The first questionnaire is to be administered to the Director of Research at university level. The second questionnaire is for the various heads of research Centres/Institutes which have some element of autonomy. The two questionnaires are meant to collect factual data on the organisational structure of university research, institutional steering, resource management, monitoring and evaluation, and valorisation of research results. In effect, the questionnaires cover all the key issues of research governance.

The third questionnaire focuses on research laboratories. Research laboratories exclude those used for teaching. The import of the questionnaire at this level is to know how the management of the laboratories are in compliance with the university procedures and rules or whether they have their own procedures.

In all, the information gathered through the questionnaires will be augmented by the interviews with the Director of Research, Graduate School etc. This should give us a vivid picture about research governance situation in the universities.

**Case Study**

The case study is to address the third level of the research – university linkage and engagement with knowledge users at community level. It is to find out what project based on university research results has been developed and deployed in conjunction with the communities and the possible impacts. A template to guide the case study has been provided. The national research team is at liberty to select a project from any sector of the economy. The national research team can use the combination of documentary reviews, interviews with both university project members and the beneficiary community, and focus group discussion, especially with the beneficiaries. The national research teams can design their own tools of investigations for the case, but should be based on the template provided for the case study.
Analysis of Data

Two main data will be collected during the study. The first one will be qualitative data collected from key informant interviews, which should be analysed qualitatively. The second will be quantitative data collected through the administration of questionnaires. The national research teams should use SPPS software to input and analyse the quantitative data. Such data should be sent to the Research Coordinator for a comparative and regional synthesis report. Attempt will be made to find the common version of SPPS being used by the national teams so as to foster easy comparative analysis.

TEMPLATE FOR DATA TO MAP UNIVERSITY IN NATIONAL INNOVATION SYSTEM

<table>
<thead>
<tr>
<th>Structure</th>
<th>Learning systems and technological capabilities</th>
<th>Knowledge flows and networks</th>
<th>Source of information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge production institutions (Universities, Polytechnics, Research Institutes/Centres, Learned Societies, Firms)</td>
<td>- Level of literacy University enrolments figures (2005-2010) in science and engineering disciplines - University output figures (2005 – 2010) in science and engineering disciplines - First degree holders - Advanced degree holders (e.g. Masters and PhDs) in science and engineering disciplines - Proportion of scientist to total population - Proportion of engineers to total population Intellectual Property Rights (e.g. copyrights, trademarks, patents, industrial designs)</td>
<td>Memorandum of Understanding with other universities (national and international) Memorandum of Understanding with the private sector Research cooperation with local and foreign universities Academic networks Publications (including joint scientific journal articles with local and foreign scientists)</td>
<td>National Statistical Offices UNESCO Institute for Statistics Basic University Statistics On-line data bases (ISI) National STI policies National Development Plans e.g. Growth and Strategic Papers, Vision Documents Questionnaires administered at the university level</td>
</tr>
</tbody>
</table>
The interview should start with a brief introduction on the study ie. university research governance.

Information on the interviewee

Date of interview: ..................................................

Name of the interviewee: ...........................................................................

Official title: ................................................................................................

Number of years in the position: ...........................................

1.0 Science, Technology and Innovation Policy

1.1 Does the country have a national science, technology and innovation (STI) policy or strategy, and what are key goals, objectives and strategies of the policy

1.2 In your opinion, which institutions are the main drivers of the STI policy and why?

1.3 What role did knowledge institutions, especially universities play in the formulation and implementation of the policy?

1.4 In your opinion how is the national innovation system (NIS) of the country configured and what have been the relationships between the various stakeholders?

1.5 From your experience, which institutions are driving the NIS and why?

1.6 How does the STI policy link university to other stakeholders of the NIS?

1.7 What can you say about the implementation of the national STI?
2.0 National Development Plans

2.1 To what extent does the country’s development plans, vision documents integrate STI as mechanism for achieving their goals?

2.2 To what extent does the country’s Development plan, vision documents incorporate university research as part of the strategies of achieving their development objectives?

3.0 Implementation of STI and Other Plans

3.1 Are there implementation and management plans for the STI policy, development plans etc., and which institutions are involved?

3.2 In your opinion what has been the experience in the implementation and management plans for STI?

3.3 Are there institutional mechanisms to ensure policy coordination and coherence?

3.4 What are the strengths and shortcomings of these institutional mechanisms for research coordination?

3.5 How does the university research policy/strategic plan integrates or feed into the country’s STI policy and development plans, vision documents/Growth Poverty Reduction Strategies?

3.6 What is your perception about linkages between the research mechanism of the university, other research institutions, ministries (Ministry responsible for Education, Council for Tertiary Education, and Science, Technology and Innovation?

3.7 Is there a mechanism within the ministry/council that monitors and evaluates university research, and what has been the experience?

3.8 What is your assessment of university research in relation with national development priorities?

3.9 Based on your experience what can be done to improve university research and make them more relevant to societal needs?
INTERVIEW GUIDE

UNIVERSITY LEVEL

ORGANIZATIONAL STRUCTURE

- What is your assessment of the structuring of research units?
- What are your perceptions about the internal organisation of the various research units (teams, laboratories, research centres) in the university?
- What improvements can be made about the organisation of the various research units?
- What desired changes could be made to the internal organisation of research units?
- Do you have a specialised unit for research coordination, planning and management and in your assessment what has been the performance of this unit?
- What do you think about the links between the various elements of the university research system (in terms of synergy, interdisciplinary approaches, etc.)?
- In your opinion what is the state of relationship between your university and research institutions, ministries, and other government bodies coordinating research?
- What in your opinion are the strengths and weaknesses of the university research mechanism?
- What is your proposal towards improving the research mechanism?

2.0 Institutional Steering of University Research

2.1 Governing Bodies

- What is your opinion about the criteria for selecting members of the various governing boards of research centres and units?
- Do the various research governing bodies have enough authority to direct research in the university?
- What are your views on the performance of these governing boards in directing research in the university?
• Do members of the various research units/centres make inputs into the decision-making process of the university research governing bodies?

• What is your assessment of the legitimacy and acceptance of the decisions made by the research governing bodies in the university?

• What are the key challenges faced by these governing bodies in directing research in the university?

• In your opinion, how can these challenges be mitigated?

• What good practices can you identify in research steering?

2.2 Regulation of Research

• What is your assessment of the administrative and financial procedures governing university research?

• In your opinion, what is the level of compliance with these norms and procedures by the various research units/centres?

• How often are these administrative and financial norms and procedures reviewed to reflect changes in the research administration and environment?

• What are the challenges involved in enforcing compliance with these norms and procedures?

• What can be done to improve compliance and make these norms and procedures effective?

2.3 Code of Ethics

• What is your opinion about the code of ethics governing research in the university?

• Does the code of ethics address all aspects of research involving living organisms?

• Are you aware of the last time the code of ethics was addressed by the university and what are the new areas covered?

• From your assessment, what is the level of compliance with the code of ethics?

• Are there sanctions for non-compliance of code of ethics for research, especially in research involving living organisms?

• What are these sanctions and has there been a situation where the sanctions have been imposed?

• What are the challenges faced in enforcing/ensuring compliance of the code of ethics?

• In what ways can the enforcement of the code of ethics be improved?

2.4 Accreditation of Research Units

• What is the procedure for accreditation in the university?
• Is the accreditation of the research unit/centre internally done or by an external organisation e.g. National Accreditation Board
• In your own assessment has the accreditation process improve the creditability of the research unit/centre?

2.5 **Intellectual Property**

• Has the university an office responsible for Intellectual Property Rights (IPRs)?
• From experience, does the office provide some training on IPR?
• Does the university have regulations on IPR issues?

2.6 **Strategic Planning**

• Generally, how does the university research policy/strategic plan relate to the national STI policy/development plans?
• How does the university research policy/strategic plan ensure relevancy of research conducted by the university?
• To what extent are stakeholders involved in priority setting of university research programmes?
• What has been your experience with stakeholder involvement in terms of research acceptance and implementation?

3.0 **RESOURCE MANAGEMENT**

3.1 **Human Resource**

• What is your opinion about the calibre of researchers available in the research units/centres and laboratories?
• What is your assessment of the capacity of professors to: (i) initiate and write high quality research proposals (ii) attract funding and (iii) implement research projects?
• What is your assessment of managerial capacities of research unit heads?
• By your judgement, how are young researchers mentored in terms of (i.) grant proposal writing (ii) conducting of research (iii) leadership in research (iv) writing scientific publications?
• What are your thoughts about recruitment procedures and promotions in the university?
• What are your opinions about facilities available in the university to upgrade academic levels of young researchers (eg. PhD and Post Doctoral programs)
• What mechanisms exist to retain university researchers and how effective are they?
• What is your perception of gender equality in the university research environment?
• What are your thoughts about the various university research actors and the relations they have?
3.2 Infrastructure/Research Equipment

- What is level of deployment of information and communications technology (Internet, computers, local area network, campus area network etc) for research?
- What are your thoughts about the reliability and speed of internet services in the university?
- In your opinion what can be done to improve internet services and access to other ICT services
- What is the current state of laboratory facilities in terms of: (i) equipment (ii) reagents and other consumables (iii) others
- What has been the impact of the state of laboratory facilities on the quality and relevance of research?

3.3 Financial Management

- How is research funded in university’s laboratories/research centres i.e. competitive grants, government annual budgetary allocation, donor support etc?
- Are there procedures for allocating and managing research grants in the university/laboratories/research centres etc?
- In your opinion, what is/are the main source(s) of funding for research in the university?
- What has been the impact of the sources of funding on direction of university research?
- Does the university provide training in project financial management?
- Is there a common manual for financial management of project funds?
- What are your thoughts about internal financial control mechanism for research projects?
- From your opinion, how can these be improved to ensure effective utilisation and accountability of project funds.

4.0 MONITORING AND EVALUATION

- To the best of your knowledge does the university have a mechanism for evaluating and monitoring research activities?
- What are some of the indicators used for evaluating research activities?
- What is the rationale behind research evaluation (quality, relevance, compliance with objectives of project document etc.,)?
- What is your opinion about the effectiveness of the mechanism for monitoring and evaluating of research activities?
- What are challenges encountered in research monitoring and evaluation?
- What can be done to improve upon the mechanism?

5.0 VALORISATION OF RESEARCH RESULTS

- Does the university have a policy/strategy on the valorisation of research results?
• In your opinion, how has the policy/strategy on valorisation of research results improve the performance or image of the university?
• What is your opinion about the level of scientific publications (ie. Increasing, decreasing, or no change) emanating from the University over the last five years?
• How can scientific publications from the university be improved if the situation has not positively changed over the past five years?
• What are your thoughts about the performance of the university on IPR issues?
• What can be done to improve IPR issues in the university?
• Generally, what is your opinion about the whole issue of valorisation of research results?
• How effective is university extension services to communities?
• Are beneficiaries of university involved in research conceptualisation and implementation?
• What can be done to improve university-community engagements?
• Please can you give us the main academic networks which members of the university are members?

CASE STUDY TEMPLATE

1.0 Profile of the Institution
• Research conditions/facilities (policy papers and norms)
• Researchers (number and qualification)
• Principal research activities/interests
• Main users/partners

2.0 Profile of the community
• Socio-economic conditions
• Description of the project and proposed milestones
• What problem(s) does your project address and how does the project address this problem(s)?

3.0 Type of project
• Technology transfer
• Contract research
• National flagship project
• Derived from needs assessment

4.0 Levels of community participation
• Priority setting
• Community involvement in the conceptualization of the project
• Research implementation
• Women involvement in project implementation
• Information and knowledge exchange

5.0 Outcomes of the Project (Summary of achievements)

6.0 Benefits of the Project (What is the actual impact of your project— who has benefited/what has changed?)

7.0 Sustainability and scalability

8.0 Challenges

9.0 Lessons Learnt
GENERAL PROFILE

Date of survey: ..........................  By: .................................................................

Name of University: ............................................................

Type  
Public  
Private

City and Country: .................................................................

Date of Establishment: .........................................................

TABLE 1: NUMBER OF RESEARCH PERSONNEL OF THE UNIVERSITY PER FACULTY OR UFR [UNIVERSITY DEPARTMENT]

<table>
<thead>
<tr>
<th>Faculties / UFR</th>
<th>Professors</th>
<th>Assistant/Associate professors</th>
<th>Senior Lecturers</th>
<th>Lecturers</th>
<th>Teaching Assistants</th>
<th>Total</th>
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<td>M</td>
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<table>
<thead>
<tr>
<th>Faculties / UFR</th>
<th>Research Personnel</th>
<th>Total</th>
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<td>Professors</td>
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<td></td>
<td>Assistant/Associate professors</td>
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<td>Senior Lecturers</td>
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<td></td>
<td>Lecturers</td>
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<tr>
<td></td>
<td>Teaching Assistants</td>
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**Table 2: List of Research Institutes/Centres/Graduate Schools**

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<thead>
<tr>
<th>N°</th>
<th>List of Research Centres/Units/Institutes</th>
<th>Single discipline</th>
<th>Multidisciplinary</th>
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<td>N°</td>
<td>List of Research Centres/Units/Institutes</td>
<td>Single discipline</td>
<td>Multidisciplinary</td>
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**Table 3: Personnel at Research Centres (Number)**

<table>
<thead>
<tr>
<th>Faculties / UFR</th>
<th>Research Personnel</th>
<th>Total</th>
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<tr>
<td></td>
<td>Professors</td>
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<td></td>
<td>Assistant/Associate professors</td>
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<td>Senior Research Fellows</td>
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<td></td>
<td>Research Assistants</td>
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### Table 4: Research Funding

<table>
<thead>
<tr>
<th>Sources</th>
<th>Amount (in local currency)</th>
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<tr>
<td></td>
<td>2007</td>
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<tr>
<td>Public funding (national)</td>
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<td>Private funding (national)</td>
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<td>Public funding (international)</td>
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<td>Private funding (international)</td>
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<tr>
<td>Service provision</td>
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<tr>
<td>Other</td>
<td></td>
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<tr>
<td>Total</td>
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### Table 5: List of Research Laboratories (Excluding Teaching Laboratories)

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<th>N°</th>
<th>List of Research laboratories</th>
<th>Single discipline</th>
<th>Multi-disciplinary</th>
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<td>N°</td>
<td>List of Research laboratories</td>
<td>Single discipline</td>
<td>Multi-disciplinary</td>
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**TABLE 6: Research Bonus and Allowance received by Researchers in 2010**

<table>
<thead>
<tr>
<th>Types</th>
<th>Amount</th>
<th>Frequency</th>
<th>Eligibility conditions</th>
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<tbody>
<tr>
<td>Research bonus</td>
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<tr>
<td>Research allowance</td>
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<td></td>
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<tr>
<td>Other research allowance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**QUESTIONS**

**ORGANISATIONAL STRUCTURE OF UNIVERSITY RESEARCH SYSTEM**

A.1 Type of Research Units

1. What are the research unit types existing in the university (research team, laboratory research centre, etc.)?
   - □ Research team
   - □ Research laboratory
   - □ Research centre/
   - □ Institute/
   - □ Graduate school
   - □ Other (specify)
2. Is there a policy document governing the organisation and functioning of the various research units in the university?
   - Yes
   - No
   - Not Aware

3. If yes, list key policy objectives of the document:
   ........................................................................................................................................
   ........................................................................................................................................

4. Are there certification criteria for research units?
   - Yes
   - No
   - Not Aware

5. If yes, list the tenets of the key criteria:
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................

6. Has there been any reform (LMD in the Francophone countries) in your university?
   - Yes
   - No
   - Not Aware

8. If yes, how is the reform being implemented?
   - Fully
   - Partially
   - No

9. Has the reform affected the organisation of university research?
10. If yes, in what way(s):
    ........................................................................................................................................
    ........................................................................................................................................
    ........................................................................................................................................
A.2 Coordination of University Research

11. Is there a central mechanism (office, department, committee, etc.) in charge of the coordination of university research?
   - □ Yes
   - □ No
   - □ Not Aware

12. If yes, what is the structure and memberships?
    ......................................................................................................................
    ............................................................................................................................
    ............................................................................................................................

13. On the scale of 1 – 5 (where 1 = very weak, 2 = weak, 3 = average, 4 = effective and 5 = very effective) assess the performance of the central mechanism for university research coordination
   - □ 1
   - □ 2
   - □ 3
   - □ 4
   - □ 5

A.3 External linkages

14. Are there structural links between the university’s research mechanism and the government body charged with higher education (ministry, department, agency)?
   - □ Yes
   - □ No
   - □ Not Aware

15. If yes, which?
    ..............................................................................................................................
    ..............................................................................................................................
    ..............................................................................................................................
    ..............................................................................................................................
16. What is the nature of this link?
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................

17. Are there links between your research unit/centre/laboratory and other knowledge production institutions outside of the university etc.?)?

☐ Yes
☐ No
☐ Not Aware

18. If yes, please list the institutions
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................

19. Are there structural links between your research unit/centre/laboratory with similar foreign institutions?

☐ Yes
☐ No
☐ Not Aware

19. If yes, please complete Table 7

Table 7: Nature of Links with Foreign Institutes/Centres/Units

<table>
<thead>
<tr>
<th>Institution</th>
<th>Nature of Links</th>
<th>Nature of collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active</td>
<td>Less Active/Dormant</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22
INSTITUTIONAL AND STRATEGIC STEERING OF UNIVERSITY RESEARCH

B.1 Governing Bodies

20 What body /bodies steer(s) research within the university?
........................................................................................................................................................................
........................................................................................................................................................................

21 Are there any decentralized steering organs (eg. board of governors for research units, Research and Conference Committees etc)?

☐ Yes
☐ No
☐ Not Aware

22 How are steering organ members selected?

☐ Appointment by whom? ........................................
☐ Election by peers
☐ Other (specify)

23 Are there women members in the existing governing bodies?

☐ Yes
☐ No
☐ Not Aware

24 If yes, how many of them in each governing body?.........................
B.2  
**Policy and regulation development**

25. Has the governing body developed and implemented the following policies and tools to govern and manage research?

<table>
<thead>
<tr>
<th>Policy and Regulation</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research policy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code of ethics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative and financial procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policies and procedures for monitoring and evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norms of accreditation of research units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual Property Rights</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valorisation of results</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others (Please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B.3  
**Strategic Planning**

26. Has the university developed and implemented a strategic research plan?

☐ Yes  
☐ No  
☐ Not Aware

27. If yes, what are the key strategies of the Plan? ..........................................................

..........................................................

..........................................................

..........................................................

28. What year was the Strategic Plan developed? ..........................................................

29. What roles do the university research units play in the overall university strategic plan?

..........................................................

..........................................................

..........................................................

30. How are research priorities set?

☐ Researchers decide within their research unit
☐ Internal consultation at the university level
☐ Internal consultation at faculty level
☐ Broad consultation with external stakeholders
☐ Other (specify) ..........................................................
31. Are there principles/guidelines for priority setting?
   - Yes
   - No
   - Not Aware

32. If yes, please list these guidelines:

33. On the scale 1–5 (where 1= very poor ,2 = poor, 3= average, 4= satisfactory, 5 = very satisfactory) rank the effectiveness of your unit’s priority setting process for research activities
   - 1
   - 2
   - 3
   - 4
   - 5

34. Are there links between university research policy/plan and national Science, Technology and Innovation Policy?
   - Yes
   - No
   - Not Aware

35. If yes, which?

36. By your judgement what are best practices your research unit can be associated with?

B.4 Funding Allocation

37. How is research in the centre/institute/unit funded?
   - Public funds (State)
   - Private national funds (contracts)
38. In terms of percentages, how dominant is international funding (both private and public) in your research unit?

- □ 10% - 20%
- □ 30% - 40%
- □ 50% - 60%
- □ 70% - 80%

39. Are the centre/institute/unit steering bodies active in acquiring and securing research funds?

- □ Yes
- □ No
- □ Not Aware

40. If yes, in which form?

...........................................................................................................................
...........................................................................................................................

41. Has the university established internal research fund for research projects?

- □ Yes
- □ No
- □ Not Aware

42. If yes, which body supervises this fund?

...........................................................................................................................

43. Is there a mechanism for funding research projects from public funds?

- □ Yes
- □ No
- □ Not Aware

44. If yes, what body supervises this funding mechanism?

...........................................................................................................................

45. Are there criteria for funds allocation?

- □ Yes
- □ No
- □ Not Aware
46. If yes, list the criteria....................................................................................................................
.................................................................................................................................................
.................................................................................................................................................

47. Does the funding type (public or private) have any impact on research governance?

□ Yes
□ No
□ Not Aware

48. If yes, how?

..............................................................................................................................................
..............................................................................................................................................
..............................................................................................................................................
..............................................................................................................................................

49. Is there a national fund for research in the country?

□ Yes
□ No
□ Not Aware

50. Does international funding influence research governance at your university?

□ Yes
□ No
□ Not Aware

51. If yes, how?

..............................................................................................................................................
..............................................................................................................................................
..............................................................................................................................................
..............................................................................................................................................

B.5 Evaluation of Research and Programs

52. Does the university have any internal monitoring and evaluation mechanisms for research projects?

□ Yes
□ No
53. If yes, provide the guidelines/procedures for the monitoring and evaluation
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

54. On the scale of 1 – 5, (where 1 is very weak, 2, weak, 3, average, 4 effective and 5 very effective) assess the internal evaluation mechanism

- 1
- 2
- 3
- 4
- 5

55. Are there internal resources assigned to monitoring and evaluation?

- Yes
- No
- Not Aware

56. If yes, are they annually budgeted? .................................................................

57. Is there a scientific committee involved in the evaluation and approval of research projects?

- Yes
- No
- Not Aware

58. Are there external research monitoring and evaluation mechanisms?

- Yes
- No
- Not Aware

59. If yes, provide the principles governing such mechanisms...........................................

........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

60. On the scale of 1 – 5, (where 1 is very weak, 2, weak, 3, average, 4 effective and 5 very effective) assess the external evaluation mechanism
C: RESOURCE MANAGEMENT

C.1 Human Resource

61. Are there uniform procedures for recruiting research personnel (lecturers, research fellows etc)?
   □ Yes
   □ No
   □ Not Aware

62. Is there any incentive scheme to motivate and retain research personnel?
   □ Yes
   □ No
   □ Not Aware

63. If yes, what are the forms of incentives?
    Financial (indicate) ........................................................................................................
    Scientific (indicate) ........................................................................................................
    Other (Please specify) .....................................................................................................

64. Does the university have a formal system in place to assess staff research performance?
   □ No
   □ Yes
   □ Not Aware

65. If yes describe the system ............................................................................................

66. When does this performance appraisal take place? And how often is the appraisal done?
 ........................................................................................................................................

67. Are the learning/professional development needs of staff provided for?
   □ Yes
   □ No
   □ Not Aware

67. If yes, what are those provided needs? ........................................................................

........................................................................................................................................
C.2 Financial Resources

68. Is there budgetary planning for research?
   Yes ☐ No ☐ Not Aware

69. If yes, how often? ..........................................................

70. Are members of the research governing bodies involved in financial planning and monitoring?
   ☐ Yes
   ☐ No
   ☐ Not Aware

71. Is there an administrative and financial manual for the university (generally)?
   ☐ Yes
   ☐ No
   ☐ Not Aware

72. If yes, to what extent are the procedures implemented?
   ☐ Fully implemented
   ☐ Partially implemented
   ☐ Not implemented

73. Is there an internal control mechanism?
   ☐ Yes
   ☐ No
   ☐ Not Aware

74. If yes, name it?
   .........................................................................................................................

75. Is there a board committee or a management committee to oversee financial issues (generally)?
   ☐ Yes
   ☐ No
   ☐ Not Aware

C.3 Information system
76. Do you have local area network and internet connectivity?

- Yes
- No
- Not Aware

77. How would you describe your organization’s Information Technology Infrastructure (computer, connectivity, local networks functionalities?)

- State of the art
- Functional
- Somewhat operative
- Unreliable

D: VALORIZATION OF RESEARCH RESULTS

78. Does the university have a policy/strategy on the valorisation of research results?

- Yes
- No
- Not Aware

79. If yes, indicate the key tenets...

80. Which of these channels are used for disseminating research outputs?

<table>
<thead>
<tr>
<th>Dissemination Channels</th>
<th>Frequently used</th>
<th>Less frequently used</th>
<th>Sporadically used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journal articles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspaper articles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulletin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Website</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissemination Channels</td>
<td>Frequently used</td>
<td>Less frequently used</td>
<td>Sporadically used</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------</td>
<td>----------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Workshop/Conferences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio and Television</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

81. List of the journals published by the university .................................................................
..........................................................................................................................................................
..........................................................................................................................................................

82. Do the following facilities exist in the university?

<table>
<thead>
<tr>
<th>Facility</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology Transfer Centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incubator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science Parks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others (Please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

83. How many scientific articles have been published by scientists of your research unit/centre/laboratory with other scientists within the country?

84. How many scientific articles have been published by scientists of your research unit/centre/laboratory with scientists from foreign institutions?

85. Does your university have a system to collect data on research outcomes and impacts?

<table>
<thead>
<tr>
<th>Choice</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Not Aware</td>
<td></td>
</tr>
</tbody>
</table>

86. What are the main research outcomes/impact made during these last 5 years?

<table>
<thead>
<tr>
<th>Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patents, licenses and other commercial applications</td>
</tr>
<tr>
<td>Documented changes in public policy</td>
</tr>
<tr>
<td>Documented changes in professional practice</td>
</tr>
<tr>
<td>Documented changes in community well-being</td>
</tr>
<tr>
<td>Public displays and performances of creative works</td>
</tr>
</tbody>
</table>

87. If yes, describe the system .........................................................................................
88. Does the university has an MOU with local universities and other knowledge institutions

☐ Yes
☐ No

89. If yes, List the institutions.................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................

90. Does the university has research collaboration agreement foreign institutions

☐ Yes
☐ No

91. If yes, list the institutions.....................................................................................................
....................................................................................................................................................
....................................................................................................................................................
....................................................................................................................................................

QUESTIONNAIRE FOR UNIVERSITY LEVEL RESEARCH GOVERNANCE IN CENTRAL AND WEST AFRICA

TO BE COMPLETED BY THE HEADS OF RESEARCH INSTITUTES/CENTRES/GRADUATE SCHOOLS
**GENERAL PROFILE**

Date of survey: ……………………….  By: ………………………………………………………………

Name of Centre/Institute: …………………………………………………………………………………

Faculty of Affiliation: …………………………………………………………………………………

Name of University: …………………………………………………………………………………

Type

- Public
- Private

City and Country: ………………………………………………………………………………………

Date of Establishment of Institute/Centre: ……………………………………………………………

**Table 1: Personnel at Research Centre/Institute/Graduate School (Number)**

<table>
<thead>
<tr>
<th>Research Personnel</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professors</td>
<td></td>
</tr>
<tr>
<td>Assistant/Associate professors</td>
<td></td>
</tr>
<tr>
<td>Senior Research Fellows</td>
<td></td>
</tr>
<tr>
<td>Research Fellows</td>
<td></td>
</tr>
<tr>
<td>Research Assistants</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M</th>
<th>F</th>
<th>M</th>
<th>F</th>
<th>M</th>
<th>F</th>
<th>M</th>
<th>F</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


### Table 2: Research Funding

<table>
<thead>
<tr>
<th>Sources</th>
<th>Amount (in local currency)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Public funding (national)</td>
<td></td>
</tr>
<tr>
<td>Private funding (national)</td>
<td></td>
</tr>
<tr>
<td>Public funding (international)</td>
<td></td>
</tr>
<tr>
<td>Private funding (international)</td>
<td></td>
</tr>
<tr>
<td>Service provision</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

### Table 3: Research Bonus and Allowance Received by Researchers in 2010

<table>
<thead>
<tr>
<th>Types</th>
<th>Amount</th>
<th>Frequency</th>
<th>Eligibility conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research bonus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research allowance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other research allowance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
QUESTIONS

ORGANISATIONAL STRUCTURE OF CENTRE/INSTITUTE RESEARCH SYSTEM

A.1 Centre/Institute Structure

1. Is there a policy document governing the organisation and functioning of the centre/institute?
   - □ Yes
   - □ No
   - □ Not Aware

2. If yes, list key policy objectives of the document
   .......................................................................................................................
   .......................................................................................................................

3. Are there certification criteria for the centre/institute?
   - □ Yes
   - □ No
   - □ Not Aware

4. If yes, list the tenets of the key criteria
   .......................................................................................................................
   .......................................................................................................................

5. Has there been any reform in your centre/institute?
   - □ Yes
   - □ No
   - □ Not Aware

6. If yes, how is the reform being implemented?
   - □ Fully
   - □ Partially
   - □ No

7. Has the reform affected the organisation of centre/institute’s research?

8. If yes, in what way(s)
   .......................................................................................................................
   .......................................................................................................................


36
A.2 Coordination of Centre/Institute Research

9. Is there a central mechanism (unit committee, etc.) in charge of the coordination of centre/institute research?
   □ Yes
   □ No
   □ Not Aware

10. If yes, what is the structure and memberships? ..........................................................
    .............................................................................................................................
    .............................................................................................................................

11. On the scale of 1 – 5 (where 1 = very weak, 2 = weak, 3 = average, 4 = effective and 5 = very effective) assess the performance of the central mechanism for university research coordination
    □ 1
    □ 2
    □ 3
    □ 4
    □ 5

A.3 External linkages

12. Are there links between your research centre/institute and other knowledge production institutions outside of the university etc.)?
   □ Yes
   □ No
   □ Not Aware

13. If yes, please list the institutions

............................................................................................................................................
............................................................................................................................................
............................................................................................................................................
14. What is the nature of this relationship?
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

15. Are there structural links between your research institute/centre with similar foreign institutions?

☐ Yes
☐ No
☐ Not Aware

16. If yes, please complete Table 4

Table 4: Nature of Links with Foreign Institutes/Centres

<table>
<thead>
<tr>
<th>Institution</th>
<th>Nature of Links</th>
<th>Nature of collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active</td>
<td>Less Active/Dormant</td>
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<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

INSTITUTIONAL AND STRATEGIC STEERING OF CENTRE/INSTITUTE RESEARCH

B.1 Governing Bodies

17. What body /bodies steer(s) research within the Centre/institute?
........................................................................................................................................
........................................................................................................................................
18. How are steering body members selected?

Appointment by whom? ......................................................

☐ Election by peers
☐ Other (specify)

19. Are there women members on the governing body?

☐ Yes
☐ No
☐ Not Aware

20. If yes, how many of them are on the governing body?............................... 

B.2 Policy and regulation development

21. Has the governing body developed and implemented the following policies and tools to govern and manage research?

Research policy □ Yes □ No
Code of ethics □ Yes □ No
Administrative and financial procedures □ Yes □ No
Policies and procedures for monitoring and evaluation □ Yes □ No
Intellectual Property Rights □ Yes □ No
Valorisation of results □ Yes □ No
Others (Please specify)...........................................................................................

B.3 Strategic Planning

22. Has the centre/institute developed and implemented a strategic research plan?

☐ Yes
☐ No
☐ Not Aware

23. If yes, what are the key strategies of the Plan?..............................................................
.................................................................................................................................
.................................................................................................................................
.................................................................................................................................

24. What year was the Strategic Plan developed?............................................................
25. How are research priorities set?
   - Researchers decide within their research unit
   - Internal consultation at the centre/institute level
   - Broad consultation with external stakeholders
   - Other (specify)

26. Are there principles/guidelines for priority setting?
   - Yes
   - No
   - Not Aware

27. If yes, please list these guidelines:
   ...
   ...
   ...

28. On the scale 1 – 5 (where 1= very poor, 2 = poor, 3= average, 4= satisfactory, 5 = very satisfactory) rank the effectiveness of your unit’s priority setting process for research activities
   - 1
   - 2
   - 3
   - 4
   - 5

29. By your judgement what are best practices your research unit can be associated with?
   ...
   ...
   ...

B.4 Funds Allocation

30. How is research in the centre/institute funded?
   - Public funds (State)
   - Private national funds (contracts)
   - International funding (public)
   - International funding (private)
   - Other (specify)
31. In terms of percentages, how dominant is international funding (both private and public) in your research unit?
   - □ 10% - 20%
   - □ 30% - 40%
   - □ 50% - 60%
   - □ 70% - 80%

32. Are the centre/institute steering bodies active in acquiring and securing research funds?
   - □ Yes
   - □ No
   - □ Not Aware

33. If yes, in which form?

.......................................................... ..........................................................
.......................................................... ..........................................................

34. Has the centre/institute established its own internal research fund for research projects?
   - □ Yes
   - □ No
   - □ Not Aware

35. If yes, which body supervises this fund? .................................................................

36. Is there a mechanism for funding research projects from public funds?
   - □ Yes
   - □ No
   - □ Not Aware

37. If yes, what body supervises this funding mechanism?

.......................................................... ..........................................................

38. Are there criteria for funds allocation?
   - □ Yes
   - □ No
   - □ Not Aware

39. If yes, list the criteria .................................................................
40. Does the funding type (public or private) have any impact on research governance in the centre/institute?
   - □ Yes
   - □ No
   - □ Not Aware

41. If yes, how?
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................

42. Does international funding influence research governance at your centre/institute?
   - □ Yes
   - □ No
   - □ Not Aware

43. If yes, how?
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................

44. Does the centre/institute have any internal monitoring and evaluation mechanisms for research projects?
   - □ Yes
   - □ No
   - □ Not Aware

B.5 Evaluation of Research and Programs
45. If yes, provide the guidelines/procedures for the monitoring and evaluation
..........................................................................................................................................................................................
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46. On the scale of 1 – 5, (where 1 is very weak, 2 is weak, 3, average, 4 effective and 5 very effective) assess the internal evaluation mechanism

☐ 1
☐ 2
☐ 3
☐ 4
☐ 5

47. Are there internal resources assigned to monitoring and evaluation?
   ☐ Yes
   ☐ No
   ☐ Not Aware

48. If yes, are they annually budgeted? .................................................................

49. Is there a scientific committee involved in the evaluation and approval of research projects?
   ☐ Yes
   ☐ No
   ☐ Not Aware

50. Are there external research monitoring and evaluation mechanisms?
   ☐ Yes
   ☐ No
   ☐ Not Aware

51. If yes, provide the principles governing such mechanisms...........................................
..........................................................................................................................................................................................
..........................................................................................................................................................................................
..........................................................................................................................................................................................

52. On the scale of 1 – 5, (where 1 is very weak, 2 weak, 3, average, 4 effective and 5 very effective) assess the external evaluation mechanism

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
RESOURCE MANAGEMENT

C.1  Human Resource

53. Does the centre/institute have its own procedures for recruiting research personnel (lecturers, research fellows etc)?

   □ Yes
   □ No
   □ Not Aware

54. Is there any incentive scheme to motivate and retain research personnel?

   □ Yes
   □ No
   □ Not Aware

55. If yes, what are the forms of incentives?

   Financial (indicate)...........................................................................................................
   ..............................................................................................................................................
   Scientific (indicate)..............................................................................................................
   ..............................................................................................................................................
   Other (Please specify) ...........................................................................................................

56. Does the centre/institute have its own system of assessing staff research performance?

   □ No
   □ Yes
   □ Not Aware

57. If yes describe the system...................................................................................................

58. When does this performance appraisal take place? And how often is the appraisal done?

59. Are the learning/professional development needs of staff provided for?

   □ Yes
   □ No
   □ Not Aware

60. If yes, what are those provided needs?..............................................................................
C.2 Financial Resources

61. Is there budgetary planning for research?
   □ Yes
   □ No
   □ Not Aware

62. If yes, how often? ..............................................................

63. Are members of the research governing body involved in financial planning and monitoring?
   □ Yes
   □ No
   □ Not Aware

64. Is there an administrative and financial manual for the centre/institute?
   □ Yes
   □ No
   □ Not Aware

65. If yes, to what extent are the procedures implemented?
   □ Fully implemented
   □ Partially implemented
   □ Not implemented

66. Is there an internal control mechanism in the centre/institute?
   □ Yes
   □ No
   □ Not Aware

67. If yes, name it?
   .....................................................................................................................

68. Is there a board committee or a management committee to oversee financial issues (generally)?
   □ Yes
C.3 Information system

69. Do you have local area network and internet connectivity?

☐ Yes
☐ No
☐ Not Aware

70. How would you describe your organization’s information technology infrastructure (computer, connectivity, local networks functionalities?)

☐ State of the art
☐ Functional
☐ Somewhat operative
☐ Unreliable

VALORIZATION OF RESEARCH RESULTS

71. Does the centre/institute have its own policy/strategy on the valorisation of research results?

☐ Yes
☐ No
☐ Not Aware

72. If yes, indicate the key tenets........................................................................................................................................
...........................................................................................................................................................................
...........................................................................................................................................................................
...........................................................................................................................................................................
...........................................................................................................................................................................
73. Which of these channels are used for disseminating research outputs?

<table>
<thead>
<tr>
<th>Dissemination Channels</th>
<th>Frequently used</th>
<th>Less frequently used</th>
<th>Sporadically used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journal articles</td>
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<td>Workshop/Conferences</td>
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<tr>
<td>Radio and Television</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
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</tr>
</tbody>
</table>

74. List of the journals published by the centre/institute..........................................................
........................................................................................................................................................................
........................................................................................................................................................................

75. Do the following facilities exist in the centre/institute?

- Technology Transfer Centres □ Yes □ No
- Incubator □ Yes □ No
- Science Parks □ Yes □ No
- Others (Please specify).........................

76. How many scientific articles have been published by scientists of your research centre/institute with other scientists within the country?

77. How many scientific articles have been published by scientists of your research centre/institute with scientists from foreign institutions?

78. Does your centre/institute have a system to collect data on research outcomes and impacts?

□ Yes
□ No
□ Not Aware
79. If yes, describe the system ........................................................................................................

80. What are the main research outcomes/impact made during these last 5 years?
   - Number of patents, licenses and other commercial applications
   - Documented changes in public policy
   - Documented changes in professional practice
   - Documented changes in community well-being
   - Public displays and performances of creative works

81. Does the centre/institute has MOU with other knowledge institutions
   - Yes
   - No

82. If yes, List the institutions........................................................................................................

83. Does the centre/institute has research collaboration agreement foreign institutions
   - Yes
   - No

84. If yes, list the institutions........................................................................................................

........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
GENERAL PROFILE

Date of survey: ……………………….  By: ………………………………………………………………

Name of Laboratory:

Centre/Institute/Faculty of Affiliation:

Name of University: ……………………………………………………………………………………

Type Public Private

City and Country…………………………………………………………………………………………

Date of Establishment of Laboratory ……………………………………………………………

TABLE 1: PERSONNEL AT RESEARCH LABORATORY (NUMBER)

<table>
<thead>
<tr>
<th>Research Personnel</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professors</td>
<td></td>
</tr>
<tr>
<td>Assistant/Associate professors</td>
<td></td>
</tr>
<tr>
<td>Senior Research Fellows</td>
<td></td>
</tr>
<tr>
<td>Research Fellows</td>
<td></td>
</tr>
<tr>
<td>Research Assistants</td>
<td></td>
</tr>
<tr>
<td>M F M F M F M F M F M F</td>
<td>15 15</td>
</tr>
</tbody>
</table>

49
### Table 2: Research Funding

<table>
<thead>
<tr>
<th>Sources</th>
<th>Amount (in local currency)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Public funding (national)</td>
<td></td>
</tr>
<tr>
<td>Private funding (national)</td>
<td></td>
</tr>
<tr>
<td>Public funding (international)</td>
<td></td>
</tr>
<tr>
<td>Private funding (international)</td>
<td></td>
</tr>
<tr>
<td>Service provision</td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

### Table 3: Research Bonus and Allowance received by Researchers in 2010

<table>
<thead>
<tr>
<th>Types</th>
<th>Amount</th>
<th>Frequency</th>
<th>Eligibility conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research bonus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research allowance</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Other research allowance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
QUESTIONS

RESOURCE MANAGEMENT

A.1 Human Resource

1. Does the laboratory have separate procedures for recruiting research personnel (research fellows etc)?
   - Yes
   - No
   - Not Aware

2. If no, which procedures do the laboratory follow in the recruitment exercise?..........

3. Does the laboratory have any incentive scheme which is separate from that of the university to motivate and retain research personnel?
   - Yes
   - No
   - Not Aware

4. If yes, what are the forms of the incentives?
   - Financial (indicate)
   - Scientific (indicate)
   - Other (Please specify)

5. Does the laboratory have its own formal system of assessing staff research performance?
   - No
   - Yes
   - Not Aware

6. If no, which system does it use..........

A.2 Financial Resources
7. How is research in the laboratory funded?
   - ☐ Public funds (State)
   - ☐ Private national funds (contracts)
   - ☐ International funding (public)
   - ☐ International funding (private)
   - ☐ Other (specify)

8. Has the laboratory established its own internal research fund for research projects?
   - ☐ Yes
   - ☐ No
   - ☐ Not Aware

9. If yes, which body supervises this fund?

10. Is there a laboratory-specific mechanism for attracting research funds from public sources?
    - ☐ Yes
    - ☐ No
    - ☐ Not Aware

11. If yes, what body supervises this funding mechanism?

12. Does the laboratory have its own separate criteria for funds allocation?
    - ☐ Yes
    - ☐ No
    - ☐ Not Aware

13. If yes, list the criteria:

14. Does the laboratory comply with university's administrative and financial manual?
15. If yes, to what extent are the procedures implemented?
   - Yes
   - No
   - Not Aware

   - Fully implemented
   - Partially implemented
   - Not implemented

B. MONITORING AND EVALUATION OF RESEARCH AND PROGRAMS

16. Does the laboratory conduct priorities setting exercise for its research activities?
   - Yes
   - No

17. If yes, does the laboratory follow (if any) the general university principles/guidelines for priority setting?
   - Yes
   - No
   - Not Aware

18. Does the laboratory have any internal monitoring and evaluation mechanisms for research activities?
   - Yes
   - No
   - Not Aware

19. If yes, provide the guidelines/procedures for the monitoring and evaluation

   ............................................................................................................................
   ............................................................................................................................
   ............................................................................................................................

20. Is there a scientific committee involved in the evaluation and approval of research projects?
   - Yes
   - No
   - Not Aware

C. VALORIZATION OF RESEARCH RESULTS
21. Does the laboratory have a separate policy/strategy on the valorisation of research results?

   □ Yes
   □ No
   □ Not Aware

22. If yes, how different is the policy from that of the university?

   ........................................................................................................................................
   ........................................................................................................................................

23. Which of these channels are used for disseminating research outputs?

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24. Does your laboratory have a system to collect data on research outcomes and impacts?

   □ Yes
   □ No
   □ Not Aware

25. What are the main research outcomes/impact made during these last 5 years?
☐ Number of patents, licenses and other commercial applications
☐ Documented changes in public policy
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☐ Documented changes in community well-being
☐ Public displays and performances of creative works

26. If yes, describe the system ...........................................................................................................
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27. How many scientific articles have been published by scientists of your research laboratory with other scientists within the country?

28. How many scientific articles have been published by scientists of your laboratory with scientists from foreign institutions?
## REPORT OUTLINE

<table>
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<th>Chapter</th>
<th>Source of data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHAPTER ONE</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Introduction** (Political, economic and social context) | Description of demographic, macroeconomic and social indicators;  
- Population  
- Rural/urban population (%)  
- Population growth rate  
- Life expectancy rate  
- Mortality rate (under 5years per 1000)  
- poverty  
- Gross domestic product per capita, current prices (US$)  
- Gross domestic product based on purchasing-power-parity (PPP) share of world total (%)  
- Human development index (HDI, HDI ranking)  
- percentage of population living below monetary poverty line (USD $2/day)  
- GDP growth rate | Documentary review and database searches eg IMF, World Bank, National statistics office, budget statements etc |
<p>| <strong>CHAPTER TWO</strong> | | |
| University and NIS | Key elements of the national STI/research policy; development plans/ related sectoral STI policies; university research стратегических планов. Сильные и слабые стороны | Documentary review and interviews |
| <strong>CHAPTER THREE</strong> | | |
| Mapping of Universities | Please refer to the template provided | |
| <strong>CHAPTER FOUR</strong> | | |
| Case Study | Description of university linkage and community engagement; type of project, mode of interaction s, major findings and recommendation | |
| <strong>CHAPTER FIVE</strong> | | |</p>
<table>
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<tbody>
<tr>
<td>University Level</td>
<td>Analysis of results from questionnaire administration and interviews</td>
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<tr>
<td>CHAPTER SIX</td>
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</tr>
<tr>
<td>Major Findings</td>
<td>Summary of findings from: University and NIS, university governance, case study including identified best practices</td>
</tr>
<tr>
<td>CHAPTER SEVEN</td>
<td></td>
</tr>
<tr>
<td>Key Recommendations</td>
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