CONCEPT PAPER
ON THE ESTABLISHMENT OF

KARAGWE UNIVERSITY COLLEGE OF AGRICULTURE AND THE CENTER FOR ENVIRONMENTAL STUDIES (KAUCOACES)

1. INTRODUCTION

Karagwe is one of the seven administrative districts of the Kagera region in Tanzania. The district covers an area of 7,716 Km^2 and is located in the north western corner of Tanzania. It borders the Republic of Uganda in the North, the Republic of Rwanda in the West, the districts of Ngara and Biharamulo in the South and Muleba, Bukoba and Misenyi to the East. For more geographical information and other important characteristics go to www.tanzania.go.tz/districts/karagwe/. The district is endowed with different natural resources; however, majority of households remain to be poor. Apart from producing practical oriented graduates and entrepreneurs, the proposed university is envisaged to be a nucleus for attracting other development oriented initiatives and would have a wide economic impact within the district and neighbouring regions.

The ides of establishing KAUCOACES is influenced by the economic, social and cultural characteristics, as well as by the formal structures of the government and other features of the political system in the country. In general, Tanzania remains a poor country by world standards; its growth constrained by international debt and by world prices for the commodities that it exports, which continue to deteriorate against the costs of production and price of imports. The country faces the need of creating high-skilled workforce and creating new opportunities for the growing population and reversing the exodus of youth from rural to urban areas. With this in mind, one area that is given priority by the government is the provision of tertiary education. This is to develop a highly-skilled workforce of entrepreneurs that would cater for the country's current need of transforming the agricultural production system through efficient use of available resources and changing the peasant dependent economy to a more productive and trading oriented economic system.

Both the education and agricultural policies in Tanzania support the private organizations and social groups to establish higher education institutions. This project is therefore supported at district, regional, and national levels. It is anticipated that at full capacity the number of students will be 3,000 thousand. The Karagwe District Council has already granted 422.64 hectors of land for undertaking this project. The

proposed university college (i.e., KAUCOACES) will be the constituent college of Tumaini University, which is governed by the Evangelical Lutheran Church of Tanzania. Tumaini University was founded by the ELCT in 1996. The establishment of the University follows the decision of the government of Tanzania to liberalize the education sector and subsequent enactment of the Education (Amendment) Act No. 10 of 1995. The University is accredited by the Higher Education Accreditation Council of Tanzania. At present, Tumaini University consists of four constituent colleges (i.e., Dar es Salaam College, Iringa University College, Kilimanjaro Christian Medical College, and Makumira University College). This is to increase administrative capacity and efficient use of available human and physical resources. For more details on Tumaini University go to http://elct.org/tumaini.html.

It should be noted that Tanzania remains a poor country by world standards. Apart from multitude of other factors, its growth is constrained by international debts and by world prices for the commodities that it exports. The Tanzania trade deficit is worsening and cost of production in the agricultural sector is increasing. Whereas the country faces the challenge of feeding the rapidly growing population, there is a continuous exodus of youth from rural to urban areas. Job creation in rural areas through agricultural transformation and value adding are essential to achieve the objective of food security and to reverse the exodus. This can be achieved by developing a workforce with specialized agricultural skills, imparted by high learning institutions. Therefore, the proposed KAUCOACES will be an important institution towards agricultural transformation and developing a sustainable economic system in Tanzania.

2. RATIONALE

Tanzania Development Vision (TDV) defines broad development goals aimed at raising the general standard of living of Tanzanians to the level of a typical medium-income developing country by the year 2025. The TDV, among other aspects, sees education as critical to creating the mindset necessary for national development and competitive economy that will be the driving forces for the realisation of that vision (Anonymous, 2005). The document identifies quality education as essential (pivotal) in the country's strategies for poverty reduction. However, the current education provision system is still inadequate to the needy students, especially in rural areas. In order to create an innovative and a sustainable education system, the private sector and social groups that are not for profit need to be involved. This will allow providing relevant skills to needy students and empowering the next generation, which ultimately; will determine the success or failure of Tanzania's sustainable development goals. In basic terms, education is perceived not only as infusing knowledge but also as equipping citizens with the ability to understand and unravel the problems within society caused by the ever changing economic, technological and social environment in which we live in. The

government of Tanzania therefore emphasizes that the modern economies require adequate supply of well-educated and well-trained labour force by higher learning institutions.

In Tanzania, agriculture plays a dominant role and accounts for about a half of the country-s Gross Domestic Product and export earnings. In addition, the agricultural sector employs more than 80% of the economically active population. Still, small-scale farming dominates the agricultural production and farming system. The advantage is that Tanzania has enough land to allow agricultural expansion and the population density across the country is still low, averaging at forty people per square kilometre. Despite extensive areas being occupied by national parks and other areas being unsuitable for any form of agriculture, there are still substantial areas where crop production and ranching could be practised more intensively to a commercial scale. There are over seven million hectares of irrigation land, which are deemed to have high or medium potential. The challenge is to increase the irrigated acreages and to achieve the existing potential.

To support agricultural transformation in Tanzania, the current president stated clearly that:

> *"I believe that the only way in which we as a nation can combat poverty effectively is through sustained investment within agriculture in order to increase productivity and create greater employment opportunities. This investment should be directed towards a number of key areas such as advancements in technology and innovation, improved inputs, increased access to irrigation, enhanced crop marketing and education to small-scale farmers"*

Besides the good intention of the President and his government, agriculture remains vulnerable, burdened with an unproductive workforce, and relying on capricious rainfall. Further, agriculture is restricted by poor quality inputs and lack of technological innovation. Efforts have been made to secure the future of the sector, such as the establishment of the New Co-operatives Policy 2002, and the enactment of the New Co-operatives act 2003, as well as the move to improve security of the land tenure for the small-scale farmers. However, even if new policies are adopted, unless the skilled workforce is available to support the progress, agriculture will not become pivotal for sustainable development.

Despite an increase in agricultural growth over the past decade, the lack of development in rural areas has again come to the forefront of the Tanzania political agenda. It is well known that the majority of the poor (about 80% of Tanzanians) reside in rural areas, prompting a refocusing by government upon rural development

strategies in relation to poverty reduction. Skilled workforce will bring about improvements in labour performance and returns, which will further help in establishing demand for both inclusion and empowerment in the development process.

Worldwide, both adoption of new agricultural innovations and increased productivity are usually associated with investing in agricultural education and extension. Increasing the number of workforce skilled in agricultural production and natural resource management, promotes the agricultural sector as an instrument to combat poverty. The adoption of new innovations that requires specialized skills will transform the agriculture sector from traditional practices into value adding production system, and thus; creating both backward and forward linkages throughout the economy, via the creation of new agro-processing and marketing activities. For example, a recent study by Kaliba et al. (2008) indicates that the economic multiplier of agro-processing sector in Tanzania was more than 3; meaning that, every shillings invested in agro-processing sector generate more than 3 shillings for the entire economy.

Due to these facts, the government has been emphasizing the need of facilitating the private sector and not for profit groups to establish high learning institutions to increase the numbers of skilled entrepreneurs and extension workers at both undergraduate and graduate levels. The concept of establishing KAUCOACES is based on the premise that Tanzania economic development, in many years to come; will indeed depend upon the performance of the agricultural sector, which will be influenced by trained, practical oriented and skilled agricultural workforce.

3. PROBLEM STATEMENT

Higher education in both quality and adequacy are vital towards achieving sustainable development goals. Without it, Tanzania cannot be assured of its human development or effective democratic functioning. The Tanzanian government has recognised this critical role of higher education and is trying to seize the opportunity for effective change. However, the situation is still far from being ideal. Forty-one years ago, Tanzania established its first university namely University of Dar es Salaam, which started in one room, with only eight (8) students. The number of both public and private universities in Tanzania has increased in recent years. There were twenty-two universities and university colleges in the country by the end of 2007. This means, the enrolment of students in the universities has automatically increased. However, this increase has not focused on agriculture and related fields.

Currently, there is only one university with agriculture, forestry and livestock development concentration namely Sokoine University of Agriculture (SUA). SUA's vision is to become a centre of excellence and a valued member of the global academic

community in agriculture and other related fields. The mission of SUA is to promote development through training, research and provision of services to the public and private sectors in an environmentally friendly manner. Since its establishment, SUA has been enrolling a limited number of students because of limited facilities and lack of enough land. SUA has currently four thousand (4000) students (Anonymous, 2006). There are also some agricultural research institutions in the country that grant non-degree diplomas under the Ministry of Agriculture and Food Security and the Ministry of Livestock Development. These institutions are involved in training village level extension workers and conducting research to improve and produce high yielding crop varieties and animal breeds. However, resource limitations and constant policy changes reduce their effectiveness and impact to minimal level.

Establishment of the second university with concentration in agriculture and related fields in Tanzania is essential. First, the agriculture sector is the major employer of more than 80% of Tanzanians living in rural areas as farmers. Second, the agricultural sector contributes more than 50% of the national foreign earnings. Third, the proposed university has a regional resonance. It would enrol students not only from Tanzania, but also from all neighbouring countries, such as, Uganda, Kenya, Rwanda, Burundi, Democratic Republic of Congo (DRC) and other countries in Eastern and Southern Africa. Graduates from the university will go back to facilitate the agricultural transformation process in their countries.

4. OBJECTIVES OF KARAGWE UNIVERSITY

As mentioned earlier, the purpose of this project is to positively respond to the Tanzania government policy on agricultural transformation. The mission of university would be to engage its students and professors in relevant, timely and effective university studies through training, research and inquiries, focused on promoting tertiary education and producing skilled agricultural workforce. The aim is to contribute to the government efforts toward poverty reduction and promoting sustainable economic development through modernizing the agricultural sector and efficient use of natural resources. Thus, the main objective of establishing KAUCOACES are to facilitate and support the advancement of improved farming that will provide a basis upon which agricultural producers can increase productivity and returns from agricultural capital and labour. In turn, this will attract additional investment from within and outside the country.

The long term strategic-plans of the proposed university, which tally with Tanzania's agriculture and education policies, include the following:

a. To contribute to the implementation of the existing plans of promoting the quality and quantity of food and cash crops.
b. To contribute to the promotion strategies of the Nile Equatorial Lakes Subsidiary Action Program (NELSAP) activities in all eastern and central African countries.
c. To facilitate the implementation process of the Millennium development goals and targets.
d. To contribute to the implementation of the national policy on poverty reduction that stresses the importance of utilising efficiently the abundant natural resources towards poverty reduction.

The proposed main areas of concentration to begin with include:

a. Crop Science

The crop science program will seeks to improve the grain yield and value-added traits of different crops; improve the agronomic characteristics of these crops; and provide educational opportunities for students in plant breeding, genetics, pathology and soil sciences. The aim would be promoting productive and sustainable land use practices, at the district, regional, national, and international scales by encompassing both agricultural and value added producers in rural and urban areas. The teaching and extension programs will inform agricultural stakeholders of economic, social, and technological developments relevant to agricultural systems in order to enhance and maintain productive and sustainable farms which are able to respond to a changing world. An active dialogue between the university community and other stakeholders will be maintained so that to understand, support, and communicate the challenges associated with the sustainable management of agricultural ecosystems.

b. Animal Science

The animal science program mission would be advancing agriculture system using multidisciplinary approaches to generate, teach, disseminate and apply knowledge in animal biology and management. This will be achieved through innovative research, development of successful graduates, and engagement of stakeholders to integrate and apply relevant knowledge. This is in addition to outreach programs that will serve people by providing continued improvements in the efficient and humane production of animals and associated animal products. The program will also provide lifelong opportunities for students and farmers to learn about animal biology, management systems for domestic animals, and the role of animals in a changing society.

c. Engineering and Food Technology

The aim of the Engineering and Food Technology would be to develop human resources and to expand and transfer knowledge for continuous improvement of the

safety, quality and value of food products. To accomplish this objective, an understanding of the basic principles and techniques of many disciplines, including chemistry, physics, economics, engineering microbiology, management, nutrition and public health, must be coupled with the ability to apply this knowledge to food processing and preservation as well as to marketing. The graduates of the program should acquire knowledge and skills that can be applied to design, develop and manufacture safe, high quality, value added food products and production and distribution systems for the benefit of the nation and the world.

d. Natural Resource Economics and Agribusiness

This program will serve the society by generating and disseminating knowledge in the economics and social sciences in order to provide the tools to both protect the Earth's natural resources and ensure economic and ecological sustainability for future generations. The program should be able to produce managers of food, agriculture, and natural resources system, and leaders that can influence sound public policies, promote best available science, and enhance efficient management of resources. The program will be committed to provide the highest standards of excellence in learning, research, and engagement on all aspects of the economics of production, distribution, and consumption of food and fiber goods and associated services, and public and private use of natural resources. The program should be recognized as the center of excellence for leadership in learning, discovery, and delivery of knowledge on economic aspects of all current and emerging issues related to food, fiber, management of natural resources, agribusiness development and management, and youth leadership and entrepreneurship.

e. Natural Resource Management

This program will be a leader in research, education, and outreach activities in areas as wide-ranging as conservation biology; fisheries, forest, wetlands, and wildlife science and management; quantitative ecology, ecosystem biology and biogeochemistry, and human dimensions of natural resource management. The program will be involved in developing knowledge and facilitating learning to improve society's stewardship of natural resources by advancing, integrating, evaluating and communicating knowledge of the sciences and technologies of natural resource utilization and conservation.

f. Environmental Sciences

The Environmental Sciences program will focus on research, education and outreach activities related to atmospheric physics and chemistry, carbon cycles, plant ecology, and bioremediation by studying the transport and fate of pollutants and also the effects of those pollutants on global climate and human health. This is in addition to providing students with refined knowledge of environmental issues at the local, regional, and

global scale by increasing the student's technical competence in addressing these issues, their origins, ramifications, and resolutions.

g. Informatics and Virtual Education

This program should provide and promote education and leadership in the information professions through distinguished teaching, research, and service by providing unique blend of programs to put graduates at the leading edge of the Information Society. Working in a wide variety of formats, stakeholders would be able to learn how information is created, organized, represented, stored, accessed, retrieved, managed and protected in both traditional and non-traditional media. In addition, they should be able to investigate the uses and impacts of information and technology on individuals, organizations and society, including formal and informal communities, libraries, government, and business.

5. POLICY SUPPORT

Both Tanzania education and agricultural policies are in line with the proposed university**.** The Tanzania Education Policy (Anonymous, 1995) indicates clearly that the education system in the country should change from content-based curriculum to competence-based curriculum. The teaching and learning processes at all levels have to focus on student-centred and activity oriented curriculum. The general aims and objectives of the Tanzania higher education are:

a. To guide and promote the development and improvement of the personalities of the citizens of Tanzania, their human resources and effective utilisation of those resources in bringing about individual and national development;
b. To promote the acquisition and appropriate use of literacy, social, scientific, vocational, technological, professional and other forms of knowledge, skills and attitudes for the development and improvement of the condition of man and society; and
c. To promote and expand the scope of acquisition, improvement and upgrading of mental, practical, productive and other skills needed to meet the changing and challenging needs of industry and the economy.

On the other hand, the vision statement of the Ministry of Agriculture, Food and Co-operative (MAFC) emphasize the modernisation and commercialisation and improving agricultural competitiveness and effectiveness of the co-operative unions through improving the education and skills of the agricultural workforce. This long-term perspective is focused on a more sustained effort towards the reduction of poverty by

widening the scope of sustained economic development and job creation opportunities through agricultural transformation. The mission is to build the capacity of local government authorities (LGAs) and private sector to deliver quality agricultural services, provide a conducive environment to agricultural producers to effectively contribute to increased agricultural production and productivity and to regulate and facilitate co-operative unions to deliver quality and efficient services to the agricultural sector (Anonymous, 2001a).

As stated in the Tanzania's Agricultural Sector Development Strategy of 2001 (Anonymous, 2001b) and the Agricultural and Livestock Policy of 1997 (Anonymous, 1997) these objectives are to be achieved by:

a. Utilisation of labour-saving technologies at the household level.
b. Promoting conservation tillage in drought-prone areas.
c. Promoting oxenization of cultivation where appropriate.
d. Promoting establishment of machinery hire services.
e. Developing appropriate technologies that use locally available and renewable energy sources.
f. Supporting research at public and private institutions to accelerate agro-mechanisation and agro-processing.
g. Supporting training and demonstrations of new agricultural mechanisation and agro-processing technologies.

Definitely, in order to implement the education policy effectively and/or fulfil the vision and mission of MAFC, it is obvious that the government of Tanzania has (among other things) to collaborate with both the private sector and social groups in encouraging, undertaking and co-ordinating research and training activities at higher learning institutions. As states before the proposed project is supported at the national, regional and local levels.

6. POTENTIAL OUTCOME, OUTPUT AND IMPACT

The potential outcome of KAUCOACES is contribution towards developing a skilled agricultural workforce in Tanzania, specialized in the seven concentrations to be offered by the university. The output will be measured by the numbers of graduates that will be employed by the agricultural sector and those that will be actively self-employed in the same sector. Therefore, the anticipated impacts are increased production and productivity of the agricultural sector and new job creation through value adding activities by directly and indirectly linked industries.

The other anticipated outcome is the creation of a permanent economic stimulus for the Karagwe District economy. The output is increasing demand for both human and physical capital and increased demand for both goods and services produced within the district. The numbers of small businesses are likely to increase in response to the increased demand for goods and services. The impact is job creation and improvement in welfare among Karagwe district resident and neighbouring regions.

7. COMPARATIVE ADVANTAGE

This is of particular importance and has great relevance. Clearly define the rationale and comparative advantage for ELCT Karagwe Diocese as a partner of the government for implementation of this project. Consider body of experience, lessons learned, best practices and knowledge of networks as well as prior cooperation with the government and potential donors.

8. SUMMARY AND CONCLUSION

Indeed, skilled workforce in agriculture and other related fields are necessary to facilitate sustainable economic development in Tanzania. Agriculture employs more than 80% of Tanzanians living in rural areas and contributes more than 50% of the national foreign exchange earnings. The proposed project will increase the number of experts and entrepreneurs that will transform the Tanzania peasantry agriculture to the value adding and trade oriented agriculture. In addition, having fewer universities compared to other East African countries, Tanzania needs to take action now to tap the potential of her youth and reaping the benefits offered by the higher education system. Moreover, hundreds of community based secondary schools have been and are still being established all over the country. The central government of Tanzania is seriously urging local governments in all districts to build at least one secondary school in every ward. The question is: where will these secondary school students go after completing their studies? The answer is obvious, that, we have to increase tertiary institutions to cater for these new secondary school leavers. This is emphasized by the fact that parents in Tanzanian and especially in Karagwe District are aware regarding the importance of investing in higher education for their children. It is therefore expected that; when functional, enrolment would not be a problem.

Establishing an effective and high calibre higher learning institution is not simple; it is a very big project that needs great commitment, coordination and support. The leadership of Evangelical Lutheran Church in Tanzania (ELCT), Karagwe Diocese, recognises the need of community support, the government input, domestic and foreign investor's partnership and donor supports. The leadership is committed to making this

dream come true. Ongoing efforts and activities undertaken to achieve this dream are presented in the attached annexes. For this project, there are great local supports and communities are ready to contribute building materials, labour, land and other resources available locally. This is to keep the cost of investment at a reasonable level, which will widen enrolment of qualified students from poor households. All leadership at the district, regional, and national level supports this project as explained in Annex 1.

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ANNEXES

ANNEX 1:
PRESENT STATUS OF THE PROPOSED KARAGWE UNIVERSITY OF AGRICULTURE AND THE CENTRE FOR ENVIRONMENTAL STUDIES

INTRODUCTION:
The Evangelical Lutheran Church in Tanzania (ELCT), Karagwe Diocese proposes to develop a University College of Agriculture and the Centre for Environmental Studies on a 422.64 hectors of land at Kishojo area located in the Centre of Karagwe District. This will be a constituent college of the Tumaini University, located in the Iringa Region, Tanzania. The idea is aligned with the aim of the current Tanzania Government of increasing access to higher education and creating a critical mass of professionals in the agricultural sector for sustainable economic development.

The concept paper for establishing the University has been approved by ELCT Headquarters, ELCT Diocese of Karagwe, Tumaini University College Management Council and Regional and District Authorities in the Kagera Region. Steps are underway through Tumaini University to establish a memorandum of understanding with the Tanzania Commission for Universities.

TYPE OF THE UNIVERSITY:
Establishment of universities in Tanzania is guided by the provisions of the Universities Act No. 7 of 2005. Among the requirements of the Act is that, all universities shall be established by a Charter. In the first step, the ELCT Diocese of Karagwe applied to the ELCT Tumaini University College Management Council that the proposed Karagwe University of Agriculture and the Centre for Environmental Studies be its constituent college of Tumaini University. The approval for the same has been granted. The Tumaini University College Management Council if facilitating the communication between Tanzania Commission for Universities and ELCT Diocese of Karagwe to write and approve the Charter.

Therefore, the appropriate name for proposed constituent University will be Karagwe University of Agriculture and Centre for Environmental Studies (KAUACES). The KAUACES will be a constituent University of Tumaini University College, offering a

range of programmes for training professionals in agricultural sciences and related fields for sustainable economic development.

The University will operate on-campus faculty mode and each faculty will be granted some autonomy on a range of administrative functions. Academic functions will however remain centralised under the University Council.

The administrative structure of the university will be headed by the Chancellor of the Tumaini University College.

The KAUACES will be headed by the Vice Chancellor supported by two Deputy Chancellors, one responsible for academics, research and consultancy while the other will be responsible for planning, finance and administration. The appointment of the top management of the university will be made in accordance with the Charter establishing Tumaini University College.

The proposed university when fully fledged will accommodate 3000 students on campus.

The proposed university main areas of training to begin with will include facilities of Agricultural and animal Sciences, Natural Resources Management Environmental Sciences and Management, Informatics and Virtual Education.

The Karagwe District Council has allocated 422.64 hectares of land for development of the proposed university at Kishoju area. ELCT Diocese of Karagwe is currently in the process of acquiring legal papers to the land.

FUNDING OF THE PROPOSED UNIVERSITY:

Funds for development of the proposed university are currently being worked out at local level (ELCT Diocese of Karagwe, local communities, individuals, ELCT Headquarters and external Donors (Partner churches in America, German Missions and EED also from German). Other external donors are still being approached.

DEVELOPMENT PROGRAMME OF THE PROPOSED UNIVERSITY:

Appointment of consultants for the development of the proposed university has been appointed. They included Educationists (Tumaini University) Architects, Planners, Engineers and other related and relevant fields for successful development of the proposed university. The consultants have presented proposals requirements,

preliminary costs and phasing. The consultants have visited the university site surveys, have been completed and situational analysis of the area is in progress.

It is expected that preparation of development plans for the proposed university will be ready by June 2008. These will include a master plan for the proposed university, proposed new structures teaching and administration buildings including students and staff accommodation.

The master plan thus prepared that include the development costs and land acquisition documents will then be sent to donors for funding.

It is therefore envisaged that the development of phase one on site will start by mid 2009.

In this phase, the following shall be provided:-

- Teaching buildings for the facilities of library, laboratories
- Administration buildings
- Student accommodation for 700 students
- Staff accommodation
- Auxiliary facilities
- Necessary Infrastructure

ANNEX 2:
THE PROPOSED SITE FOR THE ESTABLISHMENT OF THE UNIVERSITY

Location and Site

This part will provide a brief site analysis aimed at pointing out the suitability and characteristics of the site for the current and future land uses for the University development the Kishojo area, Karagwe District.
It also describes the procedures that will be used to prepare the master plan of the University of Karagwe.
The information presented in this chapter will facilitate the preparation of the entire University Master Plan.

Location and Site Analysis
The proposed site located at Kishojo area is within 30 minutes drive from Kayanga Town Centre, the Karagwe District Headquarters.
It covers an areas of 422.64 hectors of land. The University is to accommodate 1000 - 3000 students per year. The University of Dar es Salaam (Dar Campus) can accommodate 20,000 students in an area of 456 hectares. Based on this situation the allocated land in Kishojo area is quite adequate for the intended purpose taking into account that the university will not accommodate students more than 3,000 per year. In terms of locality the site has very commanding views, isolated on a high hilly area and low lands.

Accessibility
The accessibility to the area is through the main Bukoba - Kyaka tarmac roads and Kyaka Kayanga earth road which branch off to the university site at Kishojo settlement.

Site Boundaries
The proposed university is bounded by a secondary school to the west a river to the south east and part of the north area.

Existing Services/Utilities
A secondary school (ELCT Karagwe Secondary School) with all facilities attached to it (road, water supply – electricity is adjacent to proposed University site. Extensions of such facilities are quite possible.

Topography and Relief
The site consists of undulating landscape as well as valleys, low lands and seasonal flooding areas. The vertical heights vary from 1170 to 1260 almost a difference of 100

meters from the lowest to the highest spots. The topography of the site presents very limited difficulties against land use to be developed, pending some detailed further topographic studies/analysis. The site is generally suitable for construction, agriculture, ranching etc. Proper analysis of the areas is being done to enable the zoning concepts of land uses to be developed. The site presents good views and allows impressive solutions

Soil types and Vegetation

The site consists of natural vegetation varying from huge local trees, bushes to grasses. The main soil types include sand, sand clay and gravel. Grazing is practiced within the site. More details will be conducted to reveal the suitability for construction and agricultural purposes.

Drainage

The site has a natural drainage pattern that flows each direction into the lowlands. Apart from natural drains, rain water flows freely. The natural slope from the ridge that dominate the area provide potential for establishment of effective drainage system to be integrated with landscape planning and conservation.

Climate

Elements of climate such as wind, temperature, rain need attention as they have effects on the orientation of buildings the site is warm during the day and very cold nights and mornings, fogs are also common during the evenings and early mornings. Orientation of buildings needs to be carefully studied to maximize solar radiation and cross ventilation.

Potential Areas for Development

In considering the site potential for construction of the university land developments conditions standards and regulations focusing on landscape and conservation as issued with the MLHS will be used. These include topography, slope percentages, distance from rivers, river valleys, space requirements with respect to proposed university and related facilities as provided by MHESET. In addition space uses as per confirmed user requirements and existing similar universities will influence land use pattern of the proposed university.

Land use categories for the proposed University will be as follows:-

1. **Academic Zone**

   This includes space for lecture theatres/rooms library, laboratories workshops conference hall and offices for academic staff.

2. **Administrative Zone**

   This include the Administration Block where all offices for proposed university will be housed.

3. **Student Support Services Zone**

   Space for students hostel cafeteria commercial services, sports and recreational facilities community facilities, such as Health Centre and religious services will be housed..

4. **Staff Housing Zone**

   Staff houses research flats will be housed.

5. **Integrated Infrastructure Zone**
   Space for construction of water supply system, circulation system drainage system, electrical supply system, storm water and waste water system.

6. **Farm and Research Zone**

   Pilot farm areas
   Pilot animal keeping area
   Research areas etc.

The University Master Plan
The preparation of the proposed University Master Plan will be a pre requisite of any development on the site. The Master Plan will be a comprehensive document covering all land uses to be developed-now and future. It will be the document which will enable the university to produce its long-range capital Budget. This will be a serious document, not some airy-fairly ideal more often breached then followed. The Master Plan will thus prepare statement of intent taken at a period to be determined under various assumptions about conditions which make the plan feasible.

The Master Plan will consider land uses for all requirements of facilities to enable the proposed university to operate. These include Lecture theatre, administration buildings, classrooms, library, IT facilities, hostel, cafeteria recreation and sports facilities, community facilities (Health Centre, religious etc) shopping/commercial activities etc Telecommunication facilities and model/research area for agricultural degrees programmes.

The overall Master Plan will be prepared to consider the following development guideline:-

1. To reduce negative environmental impacts (Environmental friendly plans)

2. To maximize the present topographical site potentials (i.e. minimize degration, preserve natural trees/bushes/ forests, reduce surface run off and soil erosion.

3. To support conservation and restoration of biological and water resources (Biodiversity friendly).

4. The restore natural systems that exist.

The Master Plan Planning Brief

A planning-brief for the preparation of the Master Plan is to be prepared by the consultants in collaboration with ELCT. This brief will provide guidance for planning and development of the proposed university in accordance with the development guidelines issued with the MLHS & MHE&T and TCU and other relevant institutions.

The purpose of the studies required under the brief are to:-

1. Analysis the existing characteristics of the University site.

2. Develop a land use action plan of the area.

3. Develop preferred and optional structure plan for the University area within the frame work of the aims and objectives defined in the brief and all stakeholders (University Council, Ministry of High Education TCU/MCHS etc) and within recommendations prescribed in the land use action plan.

4. Develop preferred and optional draft Master Plan of the University area showing development option within the framework of the approved structure plan that

provides conditions which will allow students/people as individuals or groups to establish in identity with their surroundings.

5. Prepare a final Master plan based on the approved draft development plan which will show all land use requirements in sufficient details as to allow details surveys, engineering documentation to proceed.

6. Prepare corridor plans and carry out alignment investigations for arterial and other road system within the University area.

7. Develop details landscape plans within the framework of the total landscape concept for the site and surrounding areas.
8. Carry out preliminary engineering designs and documentation for all infrastructure services requirements.

9. Carry out land and engineering survey requirements necessary for development of the University site.

10. Prepare detailed guideline drawings for the development of buildings required for development of the University (Architectural briefs of all building components at the University) including local activity centre, non standard residential areas group housing and higher density proposals.

11. Prepare realistic implementation programs short, medium and long-term including capital budget for each phase.

12. Monitoring and evaluation of development programs – including yearly reviews.

ANNEX 3:
INITIAL REQUEST OF ASSISTANCE AND SUPPORT

In order for our dream to be effectively realized, assistance from the government and citizens in general will be required.

At this initial stage the following will be required:-

1. Additional land to allow space for different campuses in accordance with the requirements especially a land for demonstration farms.

2. Provision of adequate power and water by statutory bodies

3. Permanent and dependable access of a tarmac road from Kyaka to Kayanga.

4. Other support as may be submitted for consideration by to the government and other relevant partners.

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