

ANNEX I- Proposed Collaborations between Austrian Institutions and UNZA

Recommendation 1: Various collaborative academic activities

These would involve all the Schools at UNZA and the activities would be in the areas of:

- (i) Student Exchange
- (ii) Research Visits
- (iii) Joint on-line programmes
- (iv) Staff Exchange

Recommendation 2: Establishment of the University of Zambia as a “Centre of Excellence” in Science, Technology, Education and Mathematics (STEM)

UNZA has highly trained human resources of 691 Academic members of staff of which 38 are Professors, 1,938 are technical / support staff, and facilities that provide the pivotal lifeline of teaching, research and public service guided by the Strategic Plan 2008-2012 whose focus areas are:

- 1) Promote and Maintain Excellence in Teaching & Learning: curricula reforms to offer relevant socially and economically important programmes as well as improving quality of teaching and learning by strengthening examiner system and the use of ICT;
- 2) Improve the Quality & Output of Research and Consultancy: strengthening the research competences by academic-, research- and junior staff. It also includes restoring the University’s position as a centre of excellence in research by enhancing international interaction via conferences etc. as well as it includes research in teaching programs and improvement of internal and external consultancy;
- 3) Strengthen Financial Management & Diversify Sources of Income: an improved financial system and reaching at least 50 per cent of total revenue from self-generated sustainable sources;
- 4) Strengthen the Management System: a more participatory bottom-up approaches as well as transparency and decentralisation of finances and decision making processes;
- 5) Improve Staffing Levels: improvement of UNZA’s ability to recruit and retain staff and reach a lecturer-student ratio of 1:10 as well as improving the staff policy;
- 6) Increase the Scope & Maintenance of Physical Infrastructure: improving office infrastructure as well as maintaining physical infrastructure;
- 7) Improve the State of the Library and ICT facilities: improvement of ICT, physical and technical capacity of the Library as well as establishing a University archive; and
- 8) Ensure the Stability and Continuity of the University Calendar: promoting of a stronger sense of belonging and commitment to the University leading to stability and continuity of the University calendar.

Three faculties are natural participants in STEM. These are the School of Engineering, the School of Mines and the School of Natural Sciences.

Recommendation 3: Research in Chemistry involving:

- i) The search for new drugs: Design, synthesis and evaluation of bioactivity of potential small bioactive molecules.
- ii) Investigation of bioactive natural products and value addition to the products
- iii) The isolation and identification of bioactive ingredients in Zambian traditional medicine for the purpose of standardization, validation and drug development.

Recommendation 4: Establishment of a Centre of Excellence in Veterinary Medicine

This center would specialize in:

- i) Animal sciences, agricultural economics, crop sciences, soil sciences, food sciences and human nutrition
- ii) Horticulture production, postharvest and processing
- iii) Animal feed processing
- iv) Food processing

Recommendation 5: Training Opportunities and Research in Solar Energy

A Solar Energy Centre of Excellence will soon be launched at UNZA. The SEC will be happy to collaborate in training and research

Solar energy has in recent years emerged as economically & environmentally sustainable energy source. It is widely regarded as a cornerstone of sustainable development due to its contribution towards mitigating climate change. It is now cost competitive with other energy sources.

The Zambian energy sector is growing rapidly. Government plans to increase overall national access to electricity from the current 30% to 66% and rural electrification from the current 5% to 50% by 2030. Government also plans to diversify its energy mix to mitigate risks of climate change

A number of solar energy projects have been initiated recently, which includes Utility-scale: IFC / IDC Scaling Solar program aiming to install 600MW solar energy, the German Feed-in tariff GET-Fit program to implement the Government's Renewable Energy feed-in-tariff (REFIT) strategy, solar mini grid program under REA, and roof-top solar systems at ZESCO, Medical Stores and the Parliament, as well as several off-grid programs. As a result Zambia, solar energy is poised to be a billion dollar industry in Zambia within the next few years.

Lack of supporting services limits growth of the solar energy Industry. For example

- Trained technical manpower needed for installation, maintenance, sizing, designing and fault repair is highly deficient in Zambia
- Testing and certification facilities needed for quality assurance do not exist in Zambia

- No public demonstration sites of existing and new technologies for improving public awareness
- Universities and Institutions of higher learning conduct little research needed in the solar industry (e.g. technical and financial sustainability of off-grid and mini-grid systems)
- Little advisory/consultancy support to government, ZESCO, and private sector (e.g. on such issues as grid absorbing capacity of the national grid, financial viability of solar water heaters).

The Solar Energy Centre at UNZA will fill the above gap by providing a comprehensive set of six support services, viz., training, testing, demonstration, education, research and development, consultancy and advisory, under one roof. The SEC was inaugurated on 22nd November 2018. This project aims to scale up the SEC to make it fully functional and contribute to sustainable development through increased uptake of solar energy.

1. SCHOOL OF ENGINEERING

AREAS OF COOPERATION AND COLLABORATION BETWEEN THE SCHOOL OF ENGINEERING (UNIVERSITY OF ZAMBIA) AND THE AUSTRIAN UNIVERSITIES

Ideas of collaboration between the Austrian Universities and the School of Engineering at the University of Zambia

Item #	DESCRIPTION	TARGETED TIMELINE
1	To explore opportunities of partnership in research in the Engineering Fields (Agricultural Engineering, Civil and Environmental Engineering, Electrical and Electronic Engineering, Information and Communications Technology, Cyber Security, Geomatic Engineering, Mechanical Engineering, Construction Engineering & Infrastructure Management, Renewable Energy Engineering). Especially collaboration that come with funded research.	Medium- and Long-term prospects
2	To explore opportunities of academic staff and student exchange programmes from the School of Engineering (vice versa) to learn on how the collaboration between the Universities of the local industry is influencing the curriculum development in our engineering fields.	Short, medium and long term prospects
3	To explore opportunities for postgraduate scholarships (at MSc/MEng levels for some of our best undergraduate graduates and/or PhD/DEng levels for some of members of staff - to even allow part-time option for those members of staff who may have constraints in undertaking full-time PhD studies.	Short, medium and long term prospects
4	To explore possibilities of laboratory equipment funding and/or book donations as a way of upgrading/equipping our laboratories	Short, medium- and long-term prospects

	and library to remain abreast with the current trends in this field of our profession.	
5	To explore possibilities of the Engineering Cooperation and collaboration based on inter-governmental and bilateral agreements for cooperation and collaboration in the fields of engineering. To this effect provision of finances for support of engineering research within the framework of engineering research cooperation projects whereby researchers from partner countries of the engineering Cooperation could access basic funding of the research projects which funds must be secured from other sources. The funding could be available mainly for research, travel and accommodation costs.	Short, medium and long term prospects
6	To explore possibilities of a way to advance research, training and programme development in all fields of competence by building university networks and encouraging inter-university cooperation through the transfer of knowledge across borders as per UNESCO's programme.	Long term prospects

Establishment of University of Zambia as a “Centre of Excellence in STEM

UNZA has highly trained human resources of 691 Academic members of staff of which 38 are Professors, 1,938 are technical / support staff, and facilities that provide the pivotal lifeline of teaching, research and public service guided by the Strategic Plan 2008-2012 whose focus areas are:

- 9) Promote and Maintain Excellence in Teaching & Learning: curricula reforms to offer relevant socially and economically important programmes as well as improving quality of teaching and learning by strengthening examiner system and the use of ICT;
- 10) Improve the Quality & Output of Research and Consultancy: strengthening the research competences by academic-, research- and junior staff. It also includes restoring the University’s position as a centre of excellence in research by enhancing international interaction via conferences etc. as well as it includes research in teaching programs and improvement of internal and external consultancy;
- 11) Strengthen Financial Management & Diversify Sources of Income: an improved financial system and reaching at least 50 per cent of total revenue from self-generated sustainable sources;
- 12) Strengthen the Management System: a more participatory bottom-up approaches as well as transparency and decentralisation of finances and decision making processes;
- 13) Improve Staffing Levels: improvement of UNZAs ability to recruit and retain staff and reach a lecturer-student ratio of 1:10 as well as improving the staff policy;
- 14) Increase the Scope & Maintenance of Physical Infrastructure: improving office infrastructure as well as maintaining physical infrastructure;
- 15) Improve the State of the Library and ICT facilities: improvement of ICT, physical and technical capacity of the Library as well as establishing a University archive; and

16) Ensure the Stability and Continuity of the University Calendar: promoting of a stronger sense of belonging and commitment to the University leading to stability and continuity of the University calendar.

Three faculties (schools) stand out clearly to champion STEM to enhance agriculture and health for the social and economic wellbeing of African citizens. These include Engineering, Mines and Natural Sciences whereas on agriculture and health, again three faculties of Agricultural Sciences, Medicine and Veterinary Medicine are renown.

2. SCHOOL OF AGRICULTURAL SCIENCES

IDENTIFICATION OF COOPERATION AREAS WITH AUSTRIAN INSTITUTIONS

ITEM NO.	GENERAL AREA OF POSSIBLE COOPERATION	SPECIFIC AREAS OF COOPERATION	DESCRIPTION OF SPECIFIC AREAS OF COOPERATION	POSSIBLE AUSTRIAN INSTITUTION TO COLLABORATE WITH UNZA – SCHOOL OF AGRICULTURAL SCIENCES
1.	Teaching and Training	Improving and expanding teaching and training in animal science, agricultural economics, plant (crop) science, soil science, food science and human nutrition	<ol style="list-style-type: none"> 1. Staff and student exchange 2. Joint programmes (establishing joint teaching undergraduate and postgraduate programmes such as horticulture, aquaculture and entrepreneurship). This could involve curriculum development in areas such as horticulture, aquaculture and incorporating entrepreneurship into existing curricula 3. Joint postgraduate student research and supervision. Students from UNZA could do specialized laboratory analyses from Austria while students from Austria could do some field research from Zambia under the supervision of academic staff from both countries 4. Textbooks in animal science, agricultural economics, plant (crop) science, soil science, food science and human nutrition 	<p>1) HBLFA Raumberg-Gumpenstein. It deals with:</p> <ol style="list-style-type: none"> i) Livestock Research ii) Plant Production and Cultural Landscape iii) Animal Welfare and Health, iv) Organic Farming and Farm Animal Biodiversity v) Environment and Resource Management, <p>2) University of Natural Resources and Sciences (BOKU)</p> <p>(A) With the Vienna Campus</p> <ol style="list-style-type: none"> i) Department of Sustainable Agriculture ii) Department of Soil Science iii) Department of Horticulture iv) Department of Animal Husbandry <p>(B) With the City Campus, Located at Muthgasse</p> <ol style="list-style-type: none"> i) Departments of Biotechnology ii) Department of Plant Sciences iii) Department of Food Sciences <p>(C) Other Departments of BOKU</p> <ol style="list-style-type: none"> i) Food science and Technology ii) Sustainable Agricultural Systems iii) Forest- and Soil Sciences iv) Crop Sciences v) Applied Genetics and Cell Biology <p>(D) Research Units and Initiatives of BOKU</p> <ol style="list-style-type: none"> i) The Center for Agricultural Sciences
2.	Research	Exploring joint research projects in	<ol style="list-style-type: none"> 1. Soil science: Soil fertility and water management; Assessment of Heavy metal 	<p>1) HBLFA Raumberg-Gumpenstein. It deals with:</p> <ol style="list-style-type: none"> i) Livestock Research

		<p>animal science, agricultural economics, plant (crop) science, soil sciences, food sciences and human nutrition</p>	<p>contamination in soils, water and food</p> <p>2. Agricultural economics: Socio-economic analyses of crop, fish and livestock value chains</p> <p>3. Plant (crop) Science: Improving crop productivity among smallholder farmers; Plant breeding for drought and heat tolerance; use of crop biotechnology to improve productivity; Improving farm productivity through modern techniques such as ICT and smart agriculture</p> <p>4. Animal Science: Crop, fish and livestock productivity by smallholder farmers; aquaculture for food security, poverty reduction and nutrition</p> <p>5. Food Science & Nutrition: food product development, food safety and quality management; understating the traditional knowledge in food processing; postharvest management e.g., mycotoxins management; improving dietary diversities</p> <p>6. General agricultural issues: Impact of Urban Expansion on Land Use Patterns; Climate change mitigation strategies</p>	<p>ii) Plant Production and Cultural Landscape iii) Animal Welfare and Health, iv) Organic Farming and Farm Animal Biodive v) Environment and Resource Management,</p> <p>2) University of Natural Resources and Sciences (BOKU) (A) With the Vienna Campus i) Department of Sustainable Agriculture ii) Department of Soil Science iii) Department of Horticulture iv) Department of Animal Husbandry (B) With the City Campus, Located at Muthga i) Departments of Biotechnology ii) Department of Plant Sciences iii) Department of Food Sciences (C) Other Departments of BOKU i) Food science and Technology ii) Sustainable Agricultural Systems iii) Forest- and Soil Sciences iv) Crop Sciences v) Applied Genetics and Cell Biology</p> <p>(D) Research Units and Initiatives of BOKU i) The Center for Agricultural Sciences</p>
3	Outreach	<p>Improving the outreach functions of the School of Agricultural Sciences particularly in animal science, agricultural economics, plant (crop) science, soil science, food science and human nutrition</p>	<p>1. Development of programmes to increase the interface between the academic and technical staff of the university with the beneficiary public and private sector stakeholders in order to increase the absorption of technologies and knowledge generated from by the University</p> <p>2. Development of programmes to efficiently and effectively transfer the knowledge, technologies and any innovations generated by the University to beneficiary stakeholders such as farmers, food processors etc</p>	<p>1) HBLFA Raumberg-Gumpenstein. It deals with: i) Livestock Research ii) Plant Production and Cultural Landscape iii) Animal Welfare and Health, iv) Organic Farming and Farm Animal Biodive v) Environment and Resource Management,</p> <p>2) University of Natural Resources and Sciences (BOKU) (A) With the Vienna Campus i) Department of Sustainable Agriculture ii) Department of Soil Science iii) Department of Horticulture iv) Department of Animal Husbandry (B) With the City Campus, Located at Muthga i) Departments of Biotechnology ii) Department of Plant Sciences</p>

				iii) Department of Food Sciences (C) Other Departments of BOKU i) Food science and Technology ii) Sustainable Agricultural Systems iii) Forest- and Soil Sciences iv) Crop Sciences v) Applied Genetics and Cell Biology (D) Research Units and Initiatives of BOKU The Center for Agricultural Sciences
4	Infrastructure development	Improving the teaching, research and outreach capacity of the School through infrastructure development in the areas of animal science, agricultural economic, plant (crop) science, soil science, food science and human nutrition	1. ICT infrastructure to improve student learning in modern techniques of agriculture 2. Laboratory equipment to improve the laboratory analytical capacity of the School in order to expand the research capacity 3. Agricultural demonstration equipment to be used in the School field station 4. Food Processing Pilot Plant for teaching of food science students in practicals and as an outreach programme for the University to be involved in training small-to-medium food processors in the country	
5	Establishment of a Centre of Excellence	Animal sciences, Agricultural economics, plant (crop) sciences, Soil sciences, food sciences and human nutrition	1) Establish a Centre of Excellence in any one of the following areas: a. Horticulture production, postharvest and processing b. Animal feed processing c. Food processing	1) HBLFA Raumberg-Gumpenstein. It deals with: i) Livestock Research ii) Plant Production and Cultural Landscape iii) Animal Welfare and Health, iv) Organic Farming and Farm Animal Biodiversity v) Environment and Resource Management, 2) University of Natural Resources and Sciences (BOKU) (A) With the Vienna Campus i) Department of Sustainable Agriculture ii) Department of Soil Science iii) Department of Horticulture iv) Department of Animal Husbandry (B) With the City Campus, Located at Muthgasse i) Departments of Biotechnology ii) Department of Plant Sciences iii) Department of Food Sciences (C) Other Departments of BOKU i) Food science and Technology

				ii) Sustainable Agricultural Systems iii) Forest- and Soil Sciences iv) Crop Sciences v) Applied Genetics and Cell Biology (D) Research Units and Initiatives of BOKU The Center for Agricultural Sciences
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3. SCHOOL OF VETERINARY MEDICINE

The School of Veterinary Medicine would like to partner with the **University of Veterinary Medicine, Vienna** in the areas outlined in Table 1.

Table 1. Collaboration areas with University of Medicine Vienna.

Item	Description
1	Establish veterinary education establishments' twinning projects with Veterinary faculties in Austria to ensure a fairer distribution of veterinary education resources in developed and developing countries, while also contributing to the 'One Health' agenda. Encourage student and staff exchange programmes. Collaborate with medical schools and biomedical schools in Austria to carry out joint research in Zoonosis, emerging and re-emerging diseases and aquaculture.
2	Setup and operate a joint wildlife student training and research facility in the Lower Zambezi National Park. Permission has already been granted by the Ministry of Tourism for establishing this facility. This facility will be used to provide undergraduate, postgraduate training and provide an opportunity for joint programmes in game capture, wildlife medicine and ecology between the School of Veterinary Medicine and prospective Veterinary faculties in Austria. The facility will also be utilized as a Research Field Station by research teams from both countries.
3	Establish a joint research laboratory twinning programme. This programme essentially involves creating and supporting a link that facilitates the exchange of knowledge, ideas and experience between faculty members and research groups in the School of Veterinary medicine and a Veterinary Educational establishment in Austria.
4	Host students, interns, professionals and researchers from Austria who wish to undertake Continuous Professional Development Courses (CPD), veterinary clinical work,

	research in tropical animal diseases, neglected tropical diseases, or zoonosis, and wildlife medicine. The School also runs a rural field station and veterinary teaching clinics which can provide a unique research and clinical veterinary training opportunities.
5	Jointly develop international accredited, blended-learning (part online and part on-site) continuous professional development (CPD) courses/programmes in tropical animal health, game capture and wildlife medicine.

The School would also like to collaborate with **HBLFA Raumberg-Gumpenstein** in the research area of species-appropriate animal husbandry, animal health and animal welfare.

Background

The School of Veterinary Medicine (SoVM) was established in 1983. A complete modern veterinary school with laboratories was built in 1986 with the support of the Japanese government. It houses four academic departments (Clinical Studies, Disease Control, Biomedical Sciences and Paraclinical Studies) and veterinary teaching clinics. With its 46 academic members of staff currently in-post and boasting of at least 95% with PhD in relevant disciplines. The School currently offers training at undergraduate and postgraduate level and carries out cutting edge research in the teaching research laboratories in the School. The school runs full-time and open distance learning programmes. All programmes have integrated technologies of knowledge transfer and dissemination improving the learner experience. The School also has 35 highly qualified technical staff who are involved in student training as well as research activities.

Selected Current research projects in the School

1. Center of Excellence for Control of Infectious Diseases of Humans and Animals
2. The Project for Surveillance of Viral Zoonoses in Africa
3. Training and Research in Aquatic and Environmental Health in Eastern and Southern Africa
4. Evaluation of the effectiveness of the Balmoral rabies vaccine and molecular characterization of the field rabies virus isolates in Zambia
5. Population genetics of *Theileria parva* in SADC countries

6. Surveillance on Viral Zoonoses in Africa. Jointly funded by Science and Technology Research Partnership for Sustainable Development
7. Development of Serological and Field Laboratory Genetic Tools for the Diagnosis and Surveillance of Filovirus Infections.)
8. Research and Surveillance on taeniid tapeworms such as *Taenia* spp and *Echinococcus* spp.
9. Research on Anthrax, Tuberculosis and plague
10. Research on environmental toxicology(pollution) both in terrestrial and aquatic environments
11. Antimicrobial resistance surveillance and genetic characterization

4. SCHOOL OF NATURAL SCIENCES

Department of Chemistry

A. Area of interest

1. Drug discovery - design, synthesis and evaluation of bioactivity of potential small bioactive molecules.
2. Bioactive Natural products, and value addition
3. Isolation and Identification of bioactive ingredients of Zambian traditional medicine for standardization, validation and drug development.
4. Asymmetric organic synthesis

Institution for potential collaboration

1. University of Leoben
2. University of Natural Resources and Life Sciences (BOKU)
3. University of Applied Sciences of Upper Austria, Wales.

B. Area of interest

1. Bioenergy and next generation fuels
2. Energy conversion; solar energy materials and photovoltaics, fuel cells
3. Functional materials: nanomaterials for chemical sensor applications, polymeric materials and testing
4. Capacity building and curriculum development/review

Institution for potential collaboration

1. University of Applied Sciences

2. Leoben University
3. University of Applied Sciences of Upper Austria

Department of Physics

1. Study Programme Development for UG and PG Programmes

The Department is desirous to introduce and to grow programmes in the following disciplines for both teaching and research.

- a) Materials Science (Photovoltaics and Photovoltaic materials, Solid State Ionics and Sensors, Functional and Strongly Correlated Materials, Biomaterials and Synthesis of Biodegradable Materials.
 - b) Nanoscience and Technology – New hybrid materials for medicine and organic electronics, metal nanoparticles for next generation drugs and new technologies for targeted drug delivery.
 - c) Medical Physics for both UG and PG (Lecturer visits and 6 months training for our lecturers to manage these programmes)
 - d) Instrumentation and Control Electronics – to have a highly industrialized Zambia, we need instrumentation and control specialists to manage and interface equipment to ICT. The department currently offers electronics courses at UG and Instrumentation Courses at PG. We would be desirous to collaborate with Austrian universities in terms of programme revision to incorporate state of the art technologies, shared licenses for control softwares such as National Instrument's LABVIEW and many more.
 - e) Big Data Analytics and Technologies – In partnership with departments within the school we intend to introduce a new programme in Data Science (Big Data Analytics and Technologies). Apart from the usual benefits of data science, the programme will churn out specialists to manage and analyse big data that will be coming of of the SKA project. We would be happy to collaborate with Austrian universities in the development and potential lecturer visits to teach and conduct workshops especially for Lecturers.
2. **Student Exchange –**
 3. **Research Visits -** for our students doing research as well as researchers to access equipment and cross-pollination of ideas.
 4. **Postgraduate Training (F2F and Online like the KTH one in Renewable Energy Engineering)** – Postgraduate training opportunities and Online Postgraduate Training like the one we had with KTH Zurich in Renewable Energy. Co-supervision of students could be part of it as well)

Training Opportunities and Research in Solar Energy

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GAP

Lack of supporting services limits growth of the solar energy Industry. For example

- Trained technical manpower needed for installation, maintenance, sizing, designing and fault repair is highly deficient in Zambia
- Testing and certification facilities needed for quality assurance do not exist in Zambia
- No public demonstration sites of existing and new technologies for improving public awareness
- Universities and Institutions of higher learning conduct little research needed in the solar industry (e.g. technical and financial sustainability of off-grid and mini-grid systems)
- Little advisory/consultancy support to government, ZESCO, and private sector (e.g. on such issues as grid absorbing capacity of the national grid, financial viability of solar water heaters).

Solar Energy Centre

The Solar Energy Centre at UNZA will fill the above gap by providing a comprehensive set of six support services, viz., training, testing, demonstration, education, research and development, consultancy and advisory, under one roof. The SEC was inaugurated on 22nd November 2018. This project aims to scale up the SEC to make it fully functional and contribute to sustainable development through increased uptake of solar energy.

5. SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

The School of Humanities would seek to explore cooperation in a number of areas based on recent initiatives that the School has embarked on but would benefit from international collaboration to improve quality and to mitigate some of the resource challenges. The proposed areas below also represent areas of deficiency, and opportunities for joint programmes with a suitable institution in Austria to provide additional capacity to augment existing capacity in the School.

1. Development of a School of Media and Communication Studies.

The Department is being expanded to provide a broader range of academic and professional programmes in media, and communication studies. At the moment, although the Department is strong in media studies, there are critical gaps in Communication Science and Photography. Hence, the School would explore support towards human resource training and mentorship programmes that would develop the much needed human resources in this area. Further, the School would seek support in development of the curriculum, and appropriate reading materials in Communication Science. Another area of collaboration would be in Photography. Currently, delivery of this programme is hampered by lack of modern equipment. The Austrian government support in securing modern photography equipment would enhance the quality of this programme.

2. Creation of Drama, Film Studies and Television Station programme

Currently the school of Media and Communication Studies has a Radio Station which it uses for teaching students. However, it does not have a Television Station. It would be of great help and benefit to the school if the Austrian government could support the school in acquiring equipment to set up a TV station for teaching the students journalism and media studies. Furthermore, the school would appreciate support towards the establishment of Film and Drama studies at the University of Zambia, in the School of Humanities and Social Sciences (to be anchored in the Department of Media and Communication Studies, and Literature and Languages). In addition, the collaboration could explore the possibility of establishing studies in Publishing at the University of Zambia. The School believes that support from the Austrian government would provide opportunities for implementation of joint professional programmes in film, publishing and the creative arts.

In terms of areas of deficiency, the University of Zambia would be seeking institutional support to include appropriate film equipment, capacity development component through training of staff, mentorships through staff and student exchange, and development of training materials.

3. Capacity strengthening in Archaeology

In 2015, the University of Zambia launched a Bachelor of Arts degree in Archaeology. However, so far there are only two members of staff to teach on this programme. The School sees opportunities for human resource training and staff exchange with Austrian based academics in this area. Also, if possible, acquisition of archaeological equipment would add value to this programme.

4. Teaching and research in social protection

In response to national needs, the School has developed new bachelors and masters programmes in social protection. The development of these programmes has been supported by the Ministry of Community Development and Social Services, the European Union and UNICEF. The University now owns these programmes and will run them as normal University programmes. However, the School would explore opportunities for collaboration with Austrian academic to support the teaching and research activities in these disciplines. The University does not have sufficient staff to deliver this programme to the highest standard. But, international exposure and experience is important in such professional programmes. Perhaps such support could come in form of staff exchange, staff sabbaticals, textbooks, and joint publications.

5. Postgraduate Scholarships

While the school has a good number of lecturers, yet there is always need to have more and more lecturers because some are appointed to national duties by government and some retire and some go into personal and private undertakings or that the university loses them for one reason or another. In order to qualify to be employed as a lecturer at this university, one should have a minimum of a master's degree. Support would therefore be appreciated in the area of postgraduate scholarships as a way of helping to empower the university in terms of lecturers.

6. Centre of Excellency

A number of social issues are coming up in society. It is important as a school of Humanities and Social Sciences to have a Centre of Excellency so that it acts as a hub and laboratory to study different social issues in order to offer guidance and direction for our nation.

7. SCHOOL OF EDUCATION

The school of education has eight departments and all have opportunities for staff and student exchange and research collaboration. The following are the departments that comprise the School of Education:

- Library and Information Systems
- Educational Psychology, Sociology and Special Education
- Religious Studies
- Primary Education
- Language and Social Sciences
- Administration and Policy
- Adult Education and Extension Studies
- Maths and Science Education

Specifically, the following departments have indicated possible areas of cooperation and collaboration as follows:

Library and Information Systems

The department wishes to collaborate in areas of programming, networking, information systems and school record management for education application.

Educational Psychology, Sociology and Special Education

The department has been having discussions on the need to introduce studies in inclusive education early identification and intervention for all categories of learners but more especially those with special learning needs.

Primary Education

The department has courses in Music, Art and Design, Physical Education and Home Economics. These courses are practically oriented yet the department lacks all the necessary equipment for the courses such as Music instruments, Art and Design computerised application programmes for education and equipment for Physical Education and Home Economics.

Language and Social Sciences

The department seeks technological input in infrastructure and modernisation of the library. Opportunities for external examination with relevant universities would also be a possible area for collaboration.

Adult Education and Extension Studies

The department is willing to explore the following as possible areas of research collaboration; lifelong education, indigenous education and adult education.