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Extra-curricular Opportunities to Develop Enterprise Skills – Nicola Burr, Centre for Enterprise and Business Development, Canterbury Christ Church University
No PowerPoints.

The Versatility of Science Graduates – Dr Denis Osborne, Elham, Canterbury

<p style="text-align: center; font-size: small;">Versatility of Science Graduates</p> <h2 style="text-align: center; color: yellow;">THE VERSATILITY OF SCIENCE GRADUATES</h2> <p style="text-align: center;">Notes for presentation at an International Conference on the Employability of Science Graduates in the Developing World, at CANTERBURY CHRIST CHURCH UNIVERSITY</p> <p style="text-align: center; background-color: #0070C0; color: white; padding: 5px;">Denis Osborne, February 2011</p>	<h3 style="text-align: center;">AFRICAN UNIVERSITIES; 1963</h3> <ul style="list-style-type: none"> □ Teaching Physics in African Universities Conference <ul style="list-style-type: none"> □ Comparison of Physics Departments – 13 Africa + 4 □ Problems perceived: threat of student elites <ul style="list-style-type: none"> □ Physicists needed to teach future engineers, medics... □ Too few students, most went into other careers □ Remedies? Make physics more exciting, attractive Tell schools; go to recruit students. Use more demonstrations. More/better technicians; more electronics; faster reading. <p style="font-size: x-small;">Osborne, Denis G, <i>University Physics in Africa</i>, International Review of Education (UNESCO), Vol X, 1964, 274-283</p> <p style="text-align: center; font-size: x-small;">Versatility of Science Graduates</p>
<h3 style="text-align: center;">DAR ES SALAAM 1964</h3> <ul style="list-style-type: none"> □ January, Accra, Preventive Detention... □ July, Start Physics, Univ Dar es Salaam; funds, time □ What would graduates do? Most teach. What need? □ How get the numbers needed for development? <ul style="list-style-type: none"> □ First year prioritise majority: overviews in special weeks on Relativity, Quantum physics, Electronics, Atmospheric physics, Transistors/Solid state, Architectural Acoustics □ Year 2,3 workshops electronics, mechanical; geophysics □ Schools lectures (cool?), POGO & equatorial satellites <p style="font-size: x-small;">Mpenba, Erasto B and Denis G Osborne, 'Cool?'. <i>Physics Education</i>, 1969, 4, 172-175</p> <p style="text-align: center; font-size: x-small;">Versatility of Science Graduates</p>	<h3 style="text-align: center;">PHYSICS IN DAR ES SALAAM</h3> <ul style="list-style-type: none"> □ Electronics: Research + electronics undergrad lab □ Science faculty Chief Technicians lecturer pay scale □ First year special topics mind-stretching → UCL □ Demonstrations to intrigue, shock (bicycle wheel) <p>Physics numbers peaked 1971, competition from new faculties, medicine, engineering, etc. That was then.</p> <p>NOW? Need for management/business specials?</p> <ul style="list-style-type: none"> □ Need for IT management (next 2 slides may not be shown) in presentation <p style="text-align: center; font-size: x-small;">Versatility of Science Graduates</p>

ENERGY AND INFORMATION

Energy, physical resources

- When used, energy and physical products get 'used up', lost
- We want more
 - more food
 - more fuel
- The need is **quantity**
- **Bigger** is cheaper

Information

- When used, information gets multiplied but may get distorted
- We get too much
 - information overload
 - finding what we want
- The need is **quality**
- **Smaller** is faster

Versatility of Science Graduates

CONCERNS OF MANAGERS

C19 Physical Products steel mill, sugar factory

- High volume sales
- Secure supplies
- Focus: inputs, suppliers
- Big plants near resources
- Cheap safe in-house labour
- Management pyramid, workers less educated

C21 Information Processing computer advice company

- High value added
- Sales, design, marketing
- Focus: outputs, customers
- Small plant 'near' markets
- Clever team, contractors
- Management network, workers well educated

Versatility of Science Graduates

VERSATILE GRADUATES

- Science graduates should be versatile
 - Needed by those who continue in science **but**
 - Needed those who move to other fields, new ideas
 - Undergrad science should introduce the unexpected
- Life histories of a few science graduates show this
 - David, in Ghana, about superfluidity 'That's impossible'
 - Taken on research journey to Maiduguri 1959, PhD at MIT to Ghana, Botswana; PNG as Prof, changed research
 - 2007 retired in Ghana; new Univ Founder/Vice-Chancellor
 - Success? What helped? Maiduguri as 'outward bound'

Versatility of Science Graduates

ENCOURAGING VERSATILITY

Demonstrations: the wheel



www.youtube.com/watch?v=Jm9qzntabls, for video
+ 500
www.youtube.com/watch?v=Jm9qzntabls

CONCEPTS of gyroscopes, precession, angular momentum, and similarities to spin of particles, nucleus, etc

Versatility of Science Graduates

GRADUATE VERSATILITY: NJAU

Ernest Njau, BSc Physics
'UDSM' 1972, MSc 1975

Assistant Lecturer UDSM

Australia PhD Radio
Communication 1985

Reports on Optimal
communication frequencies
for Radio-Telephone systems
in Tanzania, 1990s

Meteorological studies in US;
frequency analysis

Prof and Head of physics
UDSM 1994-2000 then

Prof and Head of new Dept of
Electronics UDSM

Discussions in
Dar es Salaam
June 2010

Editor 2011,
Modern Science of
Climate Changes
then 8 Feb...



Versatility of Science Graduates

VERSATILITY: MOHAMED BILAL

Met Berkeley 1970, research assistant nuclear physics

With scholarship to Howard from Zanzibar GSE level, to
Berkeley and PhD nuclear physics 1976

1976 to UDSM as lecturer in physics, work included drafting
Tanzanian legislation on nuclear radiation

1988-90 Dean Faculty of Science

1990-95 Perm Sec Science, Technology & Higher Education

1995-2000 Chief Minister, Zanzibar (part of United Republic)

2010 on, Vice-President United Republic of Tanzania

So far: versatile, confident, know they can tackle 'the new'

Versatility of Science Graduates

VERSATILITY; TWO PATELS

Gulam, UDSM first physics entry 1964, BSc 1968

□ One year suspension for protest against 'National Service'

□ Muslim, to Britain, trained as accountant

□ Work with Peari-Coutts, Jewish colleagues, management

Dinesh, UDSM electronics technician circa 1966

□ Electrical engineering degree, Nairobi

□ Hindu, to Britain, research, Lecturer University of Surrey

□ Department of Electronic Engineering

□ Play squash together, occasional suppers with me

Versatility of Science Graduates

WHAT MATTERS?

□ Hindu and Muslim playing squash for 50 years

□ Muslim with Jews; nuclear science to Vice-President

□ And for me, Physics in Ghana, 'prison graduate'

□ Professor and Dean UDSM; to Civil Service DFID

□ Training? 2 X 2 days learning to read and write

□ Aid to East and West Africa 1984-1970

□ High Commissioner, Malawi; Governance, advice, training

□ The keys? RELATIONSHIPS How promote? Practice...

□ Link students with local people + international research

Versatility of Science Graduates

<p style="text-align: center;">Science Employment in Malawi and the Zomba Workshop</p> <p style="text-align: center;">by Dr Timothy Biswick and Dr Jonas Mwatseteza</p>	<p style="text-align: center;">Presentation Brief</p> <ul style="list-style-type: none"> • Institutional Overview <ul style="list-style-type: none"> – University of Malawi – Faculty of Science • Employment Opportunities • The Zomba Workshop - Highlights • Conclusions <p style="text-align: right;">2</p>
<p style="text-align: center;">Structure of University of Malawi</p>	<p style="text-align: center;">University of Malawi</p> <p style="text-align: right;">4</p>
<p style="text-align: center;">Chancellor College</p> <p style="text-align: right;">6</p>	<p style="text-align: center;">Chancellor College</p> <p style="text-align: right;">8</p>
<p style="text-align: center;">View of Zomba Plateau from Faculty of Science</p> <p style="text-align: right;">1</p>	<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Ever increasing number of university students (6500 versus 1000 enrolment) • Largest University College in Malawi with critical dedicated mass of staff • Emerging employing industries (mining, food processing) • Professional society: Chemistry, (Physics to come up) • Collaborating institutions, regional and international • Five new science universities coming up <p style="text-align: right;">8</p>

Employment opportunities

- Government departments
- Industry
- Agricultural business
- Non-governmental organisations
- Academic institutions

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The Zomba Workshop

Creating stakeholder partnership in science research and development

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Presentations

- Canterbury Christ Church University and Universities of Zambia, Malawi and Dar es Salaam
- Industry
- Association of Chemists and Chemical Engineers of Malawi
- Undergraduate and graduate students
- National Commission for Science and Technology (NCST)

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Nature of Presentations

- Description of challenges and mitigation factors
- Experiences of industry with science graduates
- Experiences and challenges of students
- Aims of commission and description of support available from NCST

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Summary of Resolutions

- Private sector to engage more students in internships
- Creation and strengthening of professional associations
- Continuation of networking with possibilities of more countries joining in
- Establishment of forums for private and university interface
- Engage University administration to lobby for appropriate funding

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Workshop benefits

- Professional body coming on board - Chemistry
- Some industry willing to have student interns beginning year two through to four
- Government departments coming forward to engage University in research
- Students' societies becoming more energised (Chemistry)

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Our Environment



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A sense of ownership












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THANK YOU
ZIKOMO




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Tales from the Market – Suzanne Taylor-Warren, Chief Operating Officer, Deabadh Group, London

  <p>Tales from the Market</p> <p>Deabadh Group February 2011</p> <p>invaluable • professional • inspiration</p>	 <p>Agenda</p> <ul style="list-style-type: none"> ➤ Deabadh Group – William & Suzanne ➤ Feedback from our some of our Clients ➤ Thoughts on Careers for this Generation ➤ What can you do to give your students an edge? ➤ Questions and Answers <p>invaluable • professional • inspiration</p>				
  <p>Deabadh Group</p> <p>invaluable • professional • inspiration</p>	 <p>Feedback from our clients</p> <table border="0"> <tr> <td>Recruitment Stage -</td> <td>On Boarding Stage -</td> </tr> <tr> <td> <ul style="list-style-type: none"> ➤ Interview ➤ Difference ➤ Wish they Knew </td> <td> <ul style="list-style-type: none"> ➤ Issues ➤ Integration </td> </tr> </table> <p>invaluable • professional • inspiration</p>	Recruitment Stage -	On Boarding Stage -	<ul style="list-style-type: none"> ➤ Interview ➤ Difference ➤ Wish they Knew 	<ul style="list-style-type: none"> ➤ Issues ➤ Integration
Recruitment Stage -	On Boarding Stage -				
<ul style="list-style-type: none"> ➤ Interview ➤ Difference ➤ Wish they Knew 	<ul style="list-style-type: none"> ➤ Issues ➤ Integration 				
 <p>Feedback from our clients</p> <p>We Want –</p> <ul style="list-style-type: none"> ➤ More diversity ➤ Graduates to be better at working with non graduates ➤ Geographical mobility ➤ Interest in the company and our industry <p>invaluable • professional • inspiration</p>	 <p>What you need to demonstrate</p> <ul style="list-style-type: none"> ➤ Cognitive Skills ➤ Generic Competencies ➤ Personal Capabilities ➤ Technical Ability ➤ Business Awareness ➤ Practical/Professional Elements  <p>invaluable • professional • inspiration</p>				

<p>deabadh Thoughts on Careers for this Generation</p> <p>Overview – Jan 2011</p> <ul style="list-style-type: none"> 8.9% increase in UK graduate jobs Further increase of 3.8% expected 2011 Starting salary median £25,000 for third year in row Tax break to 10% from 28% scheduled for intro in 2013- innovation and entrepreneurship- Patent <p>Future trends:</p> <ul style="list-style-type: none"> Mergers Spin Off Companies Globalisation Skills Research Trends. E.g <ul style="list-style-type: none"> Stem cell Climate change Health <p>invaluable • professional • inspiration</p>	<p>deabadh The World of Work 2011- 2050</p> <ul style="list-style-type: none"> >40 years! >Employed – Portfolio Career >Your career is your responsibility >You must be accountable for what you do >Get International Exposure – Cultural Sensitivity >Languages are Important >Practice your Leadership and Management whilst at University- Gap Year Sports etc <p>invaluable • professional • inspiration</p>
<p>deabadh What Can Universities do?</p> <ul style="list-style-type: none"> Embed Soft Skills in course curricula. For example: <ul style="list-style-type: none"> Basic - Application Forms- Grammar Competency Interview- practice, role play, testing, evaluation Teach Smart Moves, Examples of Career Paths Work Placements Course design reflecting business and economy needs Role Models & Mentoring Relationships. For example: <ul style="list-style-type: none"> Incubators Local Business community, Employer Networks Provide real opportunities – work based learning <p>invaluable • professional • inspiration</p>	<p>deabadh Questions</p>  <p>invaluable • professional • inspiration</p>

Employability of Science Graduates in Jamaica – Dr Rena Boothe, Hadlow College, Hadlow, Kent

<p>Employability of science graduates in Jamaica</p> <p>Rena Boothe</p> 	<p>A case study</p> <ul style="list-style-type: none"> Graduate/employability skills gained in Jamaica that eased my transition into a global environment 
<p>Largest of the English speaking Caribbean Islands 2.8 million at last census</p> 	<p>Lifelong learning</p> <ul style="list-style-type: none"> Early childhood (Basic school) mostly privately operated pre-school; frequently run by or affiliated to churches (2 to 5 years). Primary education – Publicly and privately owned (Preparatory Schools) (3 – 12 years). Secondary education – wide range – Publicly and privately owned; single-sex or co-educational (10 – 19 years). Vary from the equivalent of the English grammar school (run by churches, private ownership, quasi government) to a variety of Comprehensives and New Secondaries (government run). Tertiary – universities and colleges <ul style="list-style-type: none"> Mico Teachers' College (MICO University College) oldest founded in 1836. Shortwood Teachers' College, established 1885 as an all female teacher training facility – (started accepting males in 2001). Universities – Publicly and privately owned.

Local universities:

- **University of Technology**
 - established 1958
 - modelled on English polytechnic system
 - accorded university status in 1995;
- **Northern Caribbean University**
 - founded in 1907
 - oldest private tertiary institution in Jamaica
 - accorded university status in 1999;

- **University College of the Caribbean**
 - privately-held consortium,
 - established in 2004
 - Some Bachelor and Master degrees offered in conjunction with other institutions such as the **University of London**

- Many
 - Theological seminaries
 - Community,
 - Teacher training,
 - Sports,
 - Performing arts,
 - Agricultural colleges,
 - Vocational and
 - Human resources training institutes and colleges,
 - some of which grant degrees in conjunction with the universities.

University

- Enjoyed it
- B.Sc.
- MPhil



UWI - *Oriens Ex Occidente Lux* (Western Light Rising)

- **The University of the West Indies**, (a regional institution)
 - founded in **1948** as the University College of the West Indies (UCWI) at Mona in Jamaica, in special relationship with the **University of London** based on the recommendations of the Asquith Commission that was established in 1943 and reviewed higher education in the then British colonies
 - achieved independent university status in 1962 (Jamaica gained independence) by Royal Charter
 - Began with 33 students now has 36,417 on 3 major campuses.



Graduate skills training

- **Undergraduate**
- Degree courses – Biology, Chemistry, Statistics
- Electives – English, History, Dev of Civ & Rel
- **Post graduate**
- Seminars – discipline related
- Part time work – teaching, lab assistant, general gofer
- Work placements with other research institutions e.g. Caribbean Agricultural Research and Development Institute (CARDI), The Inter-American Institute for Cooperation on Agriculture (IICA) and Agricultural Industry projects e.g. Coffee Board



- Student revolving loan scheme
- Organization of American States (OAS) internship to the Smithsonian Institution
- Natural History Society of Jamaica



The University Council of Jamaica (UCJ)

- **National Quality Assurance** body for tertiary education,
- maintains a list of recognized (registered) higher education institutions, that have met minimum tertiary educational standards with respect to:
 - adequacy and suitability of physical facilities with regard to student enrolment;
 - scope, appropriateness and educational value of institutional courses and experiences;
 - qualifications and competence of staff;
 - adequacy of resources, library, computers, laboratories, to support the programmes; and other operational factors.
- Provides the framework that mains criteria for defining qualifications at each level and in each category of qualification.

How accessible?

- At the higher education level, only **6.6%** of the **18-24** age cohorts in Jamaica accessed higher education in **1997**, with **1.7%** accessing university education (World Bank, 2000)
- Following the CARICOM Declaration, in 1997 that access should be increased to 15 percent of the age cohort,
- Jamaica embarked on reforms and projects designed to increase access to higher education.
- Enrolment of the 18-24 age cohort is now estimated at **16.9 percent** (UNESCO-IESALC **National Report on Higher Education in Jamaica, 2006**).

White light and the rainbow fairies

- Two little clouds one summer's day,
- Went flying through the sky,
- They went so fast they bumped their heads,
- And both began to cry.
- Old Father Sun looked out and said,
- "Oh, never mind, my dears,
- I'll send my little fairy folk
- To dry your falling tears."
- **One fairy came in violet,**
- **And one in indigo,**
- **In blue, green, yellow, orange, red,—**
- **They made a pretty row,**
- They wiped the cloud tears all away.....



LIZZIE M. HADLEY.

All I really need to know I learned in kindergarten

'All I really need to know about how to live and what to do.....
Everything you need to know is in there somewhere.
 The Golden Rule and love and basic sanitation.
 Ecology and politics and equality and sane living'.

Robert Fulghum, 1990

Poetry

- William Wordsworth (1770-1850) British poet
 - **I Wandered Lonely as a Cloud**
 - and
 - Claude McKay (1889-1948) Jamaica poet
 - **Flame-Heart**
 - and
 - Katharine Tynan (1861-1931) Irish poet
 - **All In An April Evening**
- Curiosity about the natural world

And now for further study.....

- Timetables,
- Student's companion,
- Library afternoons and
- Children's own.

And what did I get from secondary school?

- Apart from my GCE O'Levels and A'Levels, afterschool clubs and sports
- A global perspective
 - Teachers from several different countries
 - Jamaica and other Caribbean islands
 - England,
 - Wales (one priest)
 - Scotland
 - Ireland
 - France
 - USA
 - India

My English Teacher – Latin, Logic & Critique

<p>Modal logic is special because it uses statements that are qualified with expressions like "necessarily", "possibly", or "sometimes".</p>	<p>3. Modal logic solves some problems.</p> <p>2. In a complex modal argument many will naturally expand at least one claim beyond reason.</p>
<p>4. Therefore, numerous people are likely to accept the conclusion of a complex modal argument.</p>	<p>6. Therefore, modal logic can solve all problems.</p>
<p>5. Convinced people is the largest obstacle to solving problems.</p>	<p>ThadGoy.com</p>

The EU and CARICOM Developing an awareness of globalisation

It has been said that
arguing against
GLOBALIZATION
is like
arguing against
THE LAWS OF GRAVITY

Kofi Annan (Former UN Secretary-General)



And outside of school

- ▶ **Community corporation**
 - Church and youth club
 - God parenting
 - Parental responsibility
- ▶ Reading, writing, arithmetic, government, sense of industry/organisation, work ethic, cooperation, time management, group dynamics, quality, communicating

And what are those skills not mentioned previously...?

- Prioritising
- Focussing
- Benefitting from constructive criticism and developmental feedback
- Relating to others within and without academia
- Using informed action
- Working in unfamiliar environments
- Interdisciplinarity
- Working on own
- Expectations and acceptance
- Information gathering
- Questioning & selectivity
- Developing an argument
- Communication skills
- Group skills
- Time management
- Organizational skills
- Presentation skills
- Assessing quality
- Research skills
- Work ethic

▶ *Thank you*

Employability of Science Graduates in Brazil – Adriana Consorte-McCrea, Department of Geographical and Life Sciences, Canterbury Christ Church University

Brazil Connections
Adriana Consorte-McCrea
Department of Geographical and Life Sciences, Canterbury Christ Church University

International Conference on the Employability of Science Graduates in the Developing World, 11-12 Feb 2011

Conservation of the maned wolf (*Chrysocyon brachyurus*): carnivore and people relationships in the southeast of Brazil.

- Threatened (IUCN), near endangered (IUCN 2009)
- Largest South American canid
- Monogamous pair territory: 25-100 km²
- Bush and grasslands, wetlands and swamps, pampas, semi-desert
- Brazil, Argentina, Paraguay, Bolivia, Peru, and possibly Uruguay (Pauls et al., 2008)
- Omnivorous generalist
- 60% animal origin and 40% fruits
- 29.2% "wolf's-fruit" (*Solanum lycocarpum*) (Ferraz, 2000)



Aims and objectives

- to study and compare the attitudes of people who play a part in the conservation of the maned wolf in rural and urban areas of the southeast of Brazil, within the domain of the species;
- to investigate how such attitudes may influence the maned wolf's status and conservation in such areas;
- to suggest how conservation strategies may be improved by incorporating such knowledge into their efforts to conserve both wolf and habitat.

Methodology

- Literature survey;
- consultations of research programmes and official records;
- fieldwork based on questionnaires and interviews (total =725).
 - Pilot field work- December 2005
 - Main field work- August 2007- October 2008

Target groups

- Schools (urban and rural)
- Zoo
- Conservation Unit
- Rural neighbours

3 Research sites within São Paulo state

- Greater São Paulo
 - São Carlos
 - Low Mogiana region
- Complementary information from other sites in São Paulo state



The maned wolf is an endangered, charismatic species that elicits positive attitudes. Therefore it could become a flagship for the conservation of the Cerrado habitat, a hotspot for endemism and biodiversity in Brazil. Efforts to clarify misconceptions and to increase positive attitudes are justified in the benefit of its conservation and that of its habitat and wildlife within it.



CCCU/IF/UNICAMP partnership

- Dr Sueli Yoshinaga Pereira of the University of Campinas and Dr Paulo Brum Pereira of the Forestry Institute in São Paulo state visited CCCU in October 2007 where they gave lectures to the Department, and they indicated a strong interest in forging closer links with CCCU through pursuing collaborative work.
- To reciprocate their visit, Dr Geoff Meaden visited both of the Brazilian institutions in September 2008



- In October 09 Adriana Consorte-McCrea and Dr. Charlotte Leigh visited the Forestry Institute and the University of Campinas, to give and attend a series of lectures:

- research developed by graduate students of the Geosciences departments (Dr. Sueli Yoshinaga Pereira, Lecturer in Hydrogeology – Department of Geology and Natural Resources – IG-UNICAMP; and Dr. Fresia Ricardi Branco – Lecturer in Paleobotany and Taphonomy – Department of Geology and Natural Resources – IG – UNICAMP).



- May 2010- Dept of Geographical and Life Sciences Research Conference, entitled "Brazil Connections" to coincide with the visit of a team of researchers from the Geosciences Department of the Campinas State University (UNICAMP)

- One of Prof. Fresia's MSc students, Isabel Cortez C. de Souza stayed for 8 weeks, based in the Geography lab. Isabel is researching the Neopaleozoic Phytogeography of the *Glossopteris* flora in the Paraná River basin, Brazil, using a GIS approach.



- August 2010- Talks about maned wolf research results and about future research plans to the Forestry Institute, Sao Paulo, and to the Society of Sao Paulo Zoos.



The Brazil/UK Biodiversity Reconstruction Forum

- This partnership is an initiative to promote bi-national opportunities for the development of research and for knowledge transfer;
- to explore funding opportunities to allow research students from the Geosciences department of the Campinas State University, Brazil to join members of the Geographical and Life Sciences department and develop research projects in the UK,
- as well as for the department's research students to develop research work in Brazil in connection to the Geosciences department of the Campinas State University or in conjunction with the Forestry Institute in São Paulo state (the third partner institution).

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Environmental studies:

- Degraded areas
- Mapping and sensing "vinhaça" disposal
- Changing temperatures in the soil, climate change
- Climate change and reforestation with native species
- River sand-mining environmental impact
- GIS applied to monitoring the effect of acid rain, deforestation, "queimadas" slash and burn and annual fires
- Effects of pollution, heavy metals, acid rain carried by the wind to natural areas of São Paulo state
- Mosquito Ecology
 - Return of yellow fever incidence in São Paulo state
 - Mosquito population analysis



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Soil ecosystems

- Results of invading species in soil composition, in relation to recovery/reforestation
- Should soil composition in production and conservation areas be different?
- Malacology
 - Lakes, water reservoirs for hydroelectric plants
 - Infestation of introduced African mollusc species on Itaipava river basin
- Human Geography
 - Monoculture impact on human societies
 - Working conditions in sugar-cane plantations



Emerging research themes:

- Comparing quaternary events in São Paulo and Kent
- The development of a multidisciplinary bi-national methodology approach
- Maintaining and reconstituting areas for biodiversity and/or economic value



Research development has been suggested in the following areas:

- Stour river system:
 - Paleobotanical study to evaluate the "naturalness" of today's system
- Comparing scale insects in green house and natural tropical environment
- Environmental studies applied to the Stour River basin and to the Mogi Guaçu River basin

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Proposed research interest areas within the umbrella theme:

- PhD/Masters projects:
 - 1) to allow students from the partner institutions in the other country to apply for a grant to join ongoing research
 - 2) varied disciplines from each institute; research based in either country.

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- Dr. Fresia, Dr. Sueli Pereira (UNICAMP) and the Forestry Institute, São Paulo, Brazil:
 - Quaternary studies of the Atlantic Forest, São Paulo, Brazil
 - This project aims to study the paleo-environmental evolution and the dynamics of the sedimentation and of the sub-surface waters in an area of transition between the Cerrado and the Atlantic Forest biomes.
 - GIS and the environment
 - Using GIS to map the paleoflora of the Paraná River Basin, Brazil (with Isabel Cortez).

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- Adriana Consorte-McCrea, Wildlife and People Initiative, Dept Geographical and Life Sciences, CCCU
- Areas of interest:
 - Wildlife conservation and relationships between people and wild carnivores
 - People's attitudes towards the maned wolf (*Chrysocyon brachyurus*) and its conservation, in São Paulo state.
 - The first part of this research has been completed in 3 different locations of São Paulo state. The next step proposed is to apply the research to all CUs covered by the Forestry Institute-IF, where the presence of the maned wolf has been recorded.



- "For both Brazilian and UK students the experience of carrying out research abroad puts them into contact with other ways of thinking, and different approaches to researching and problem solving. This should contribute to widening their horizons and should help equip them to work within different contexts- with different people and different disciplines."
- It fosters innovation and employability.

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