4th SAJU Forum Conference 2019

CONFERENCE REPORT

23-24 MAY 2019 | FUTURE AFRICA CAMPUS | UNIVERSITY OF PRETORA

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ACKNOWLEDGEMENTS

The following organisations are thanked for their support for the 2019 SAJU Forum.

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JAPAN

Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Ministry of Foreign Affairs (MOFA)

Japan Agency for Medical Research and Development (AMED)

Japan Association of National Universities (JANU)

Japan International Cooperation Agency (JICA)

Japan Science and Technology Agency (JST)

Japan Society for the Promotion of Science (JSPS)

Japan-Africa Academic Network (JAAN)

SOUTH AFRICA

Centre for Japanese Studies (CJS)

Department of Science and Technology (DST)

Embassy of Japan in South Africa

National Research Foundation (NRF)

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Dr Yoshinori Ikenaka (Hokkaido University)
Prof Refilwe Phaswana-Mafuya (DVC Research, North West University)
Prof Kazuhiro Yoshida (Hiroshima University)

Theme 2: Security and Social Justice

Prof Takahiro Morio (University of Tsukuba)
Prof Vasu Reddy (Dean, Humanities, University of Pretoria)
Prof Maxi Schoeman (Deputy Dean, Humanities, University of Pretoria)
Prof Shuhei Shimada (Nagoya University of Foreign Studies)

Theme 3: Growth, Exploration and Conservation

Dr Takahiro Fukunishi (Institute of Developing Economies)
Prof Yohei Kawamura (Akita University)
Prof Deresh Ramjugernath (DVC Research, University of KwaZulu-Natal)
Prof Zeblon Vilakazi (DVC Research, University of the Witwatersrand)

1 BACKGROUND

The South Africa-Japan University (SAJU) Forum was established to serve as a platform and structured framework for collaboration between the higher education institutions of the two countries. The biennial SAJU conferences alternated between Japan and South Africa and in 2019 the fourth conference took place in Pretoria with the theme “The human being in the 21st Century in the context of global changes”.

For the first time, the scope of the conference had been broadened to include government and industry participation. As noted by Dr Molapo Qhobela (CEO of the National Research Foundation (NRF)) in a meeting of high level delegates on the first day of the conference, SAJU needed to start taking the lead in terms of building new knowledge that served society and this required greater collaboration between academia, commerce and industry.

2 WELCOME AND GUEST ADDRESSES

Opening the conference, Prof Ahmed Bawa, CEO of Universities South Africa (USAf), noted that the need to move away from high level meetings and to focus more on collaborative enterprises had become very clear. For this reason, SAJU 4 was significantly different in that it included representation not only from academia but also industry, relevant government departments and funding agencies. In addition to the industry round table and sharing of modalities of cooperation, it was anticipated that engagement on the key research areas of health and wellness, security and social justice, and growth, exploration and conservation would be to the mutual benefit of the two countries.

His Excellency Ambassador Norio Maruyama, Ambassador of Japan to South Africa, noted that 2019 was a very challenging year and that the SAJU Forum was an ideal platform for finding a disciplined way to approach the issues that faced the global community.

In this regard, Ms Mutsuko Yasuda, Director for International Cooperation in the Ministry of Education, Culture, Sports, Science and Technology (MEXT) also highlighted how the SDGs functioned as common goals and a common language for multiple stakeholders to drive interdisciplinary, international and industry-academia-government collaborations and to make best use of cross-cutting resources for the attainment of cross-cutting goals. Japan’s Science and Technology Research Partnership for Sustainable Development (SATREPS) embodied international science, technology and innovation collaboration towards the SDGs, 30% of which took place in Africa.

In his welcoming address, Prof Tawana Kupe, Vice-Chancellor and Principal of the University of Pretoria, further emphasised that none of the matters included in the conference programme could be researched or addressed in silos. Resolving the pressing issues of the 21st Century required reflecting on what it meant to be human and on the nature of the world in which we aspired to be human. It demanded that disciplinary, institutional and national boundaries be crossed to find solutions to common problems which had important implications for scientific knowledge production and the public understanding of science. The SAJU Forum was an opportunity for scientists, researchers, academics and leaders from business and industry to be creators rather than just receivers of knowledge and to use that knowledge to confront and resolve the "wicked problems" facing the world. In the spirit of diversification, decolonisation and epistemic justice and equality, there must always be a level of equity in research, engagements and the flow of new knowledge. African researchers in particular needed to reflect on the extent to which forums such as SAJU contributed to building knowledge, experience and insight about the African continent in other societies.

Prof Jun Matsukuma, Deputy Vice-Chancellor of the Tokyo University of Foreign Studies (TUFS) highlighted the need in this age of uncertainty to work together on projects that were too complex to be addressed by any single individual or academic discipline. There was ample room for collaboration between engineers, geologists, social scientists and others, and there was already a move in this direction. He agreed with Prof Kupe's remarks about the importance of working together with practitioners in non-academic entities, including government, and of not only participating in new research but presenting and explaining this research to the public. He also noted the role that the SAJU Forum had to play in creating the context of mutual trust that was crucial for fruitful scientific collaboration.

Dr Daniel Adams, Acting Director-General of the Department of Science & Technology (DST), spoke about how the increasingly international nature of scientific collaboration created a particular dynamic for the policy makers, educators and business people who funded, managed and relied on this system for a host of social, economic and knowledge benefits. A notable development in this regard was the push for scientific openness, collaboration and cooperation. With new knowledge increasingly created within international networks, funding was now favouring collaborative projects rather than specifically national ones. Leveraging such international research funding to sustain South African science and technology initiatives helped to address areas of national need and the scarcity of supervisory capacity skills in South Africa, while collaboration with international partners also enhanced South Africa's visibility and footprint in the international scientific community. The new White Paper on Science and Technology approved by Cabinet in March 2019 would be strategically harnessed as an instrument for advancing South Africa's foreign policy agenda and optimising the role of international collaboration in line with the National Development Plan (NDP) and the Sustainable Development Goals (SDGs).

Mr Mahlubi Mabizela, Chief Director in the Department of Higher Education & Training (DHET), noted that the fact that South Africa was party to a number of international conventions, signatory to international treaties and protocols, and a member of various international bodies and associations was an indication of the value the country placed on partnerships and collaborations across the globe in the drive for development and a better world for everyone. Referring to South Africa's improved research performance over the past 20 years in aspects such as research output, world share, international research collaboration, citation impact and world rankings, he stated that the country's efforts to become a significant global partner in knowledge production were showing fruit. Mr Mabizela concluded that these developments bore testimony that in South Africa, Japan was in good company.

Delivering a keynote address at the gala dinner and reception held in honour of all the conference delegates in the evening of Day One, the then Minister of Higher Education and Training, Dr Naledi Pandor, said as universities in South Africa and Japan cemented their collaboration on research through partnerships, they must consider focusing on unconventional players who could bring fresh perspectives to resolving sustainable development problems. She said the two countries could achieve that by, among other factors:

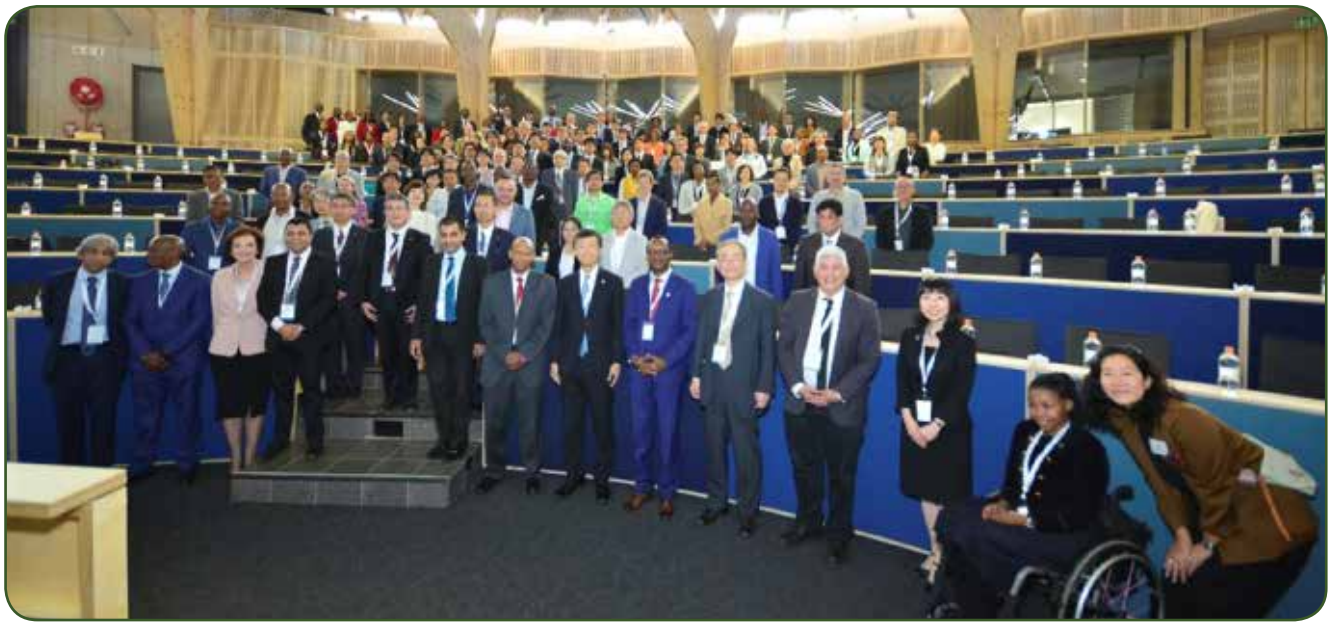
- Focusing strongly on women-led research partnerships and business innovation from such research;
- Recognising new non-state actors such as multi-national companies, who could inform innovative models of public-private partnerships;
- Including state actors involved in South-South alliances offering new options for international cooperation; and
- Allowing international partnerships to be co-owned and co-determined by all their constituents; thus leveraging African scholarship by Africa-based scientists.

Dr Pandor said developing countries today were at the forefront of global scientific discovery as demonstrated by, for example, ground-breaking work undertaken in South Africa in areas such as microbicides for the prevention of HIV-Aids transmission, as well as drug and vaccine development for malaria and tuberculosis.

She added that while conceding that research was international and collaborative, "I want the international to mean from Africa by Africa-based scientists too." She also said while acknowledging that "our friends in Japan" shared South Africa's interest in addressing "our health services, food insecurity, climate change, inadequate infrastructure, low skills development and technology hunger," these problems should also be addressed by African and African-based researchers.

The then Higher Education and Training Minister conceded that African research lagged behind that of the rest of the world in most science disciplines, the reasons being too little collaboration among African countries; too little public support for sustainable development and too little focus on programmes to mobilise science and technology for sustainable development. "So we look for international cooperation to support science and technology capacity-building here in South Africa and in Africa," Dr Pandor said.

Also recognising that science was at the heart of the African Union's Agenda 2063, Minister Pandor said science formed a firm basis for collaboration of SA and Japanese universities. While she hoped that a science focus would not exclude research partnerships in fields other than science and technology, she did encourage "collaboration on African initiatives such as the Science in Africa (EASA), an initiative of the African Academy of Sciences and the New Partnership for Africa's Development," especially to help keep African scholars and scientists on the continent, and to expand Africa-based research and innovation.



3 OVERVIEW OF THE THEMATIC AREAS

3.1 Key areas of health and wellness research

3.1.1 Dr Niresh Bhagwandin
South African Medical Research Council (SAMRC)

Dr Bhagwandin gave an overview of the situation in South Africa and Japan in terms of health and wellness.

Despite South Africa's population being less than 1% of global population, it does not compare favourably with global averages in terms of disease; maternal, newborn and child health; HIV/AIDS and TB; and violence and injury. For example, as an indicator of quality of life, life expectancy in South Africa is low compared to Japan which has shown a steady increase in life expectancy, with males reaching 85 years on average and females, 79-80 years.

In terms of the top 10 causes of death, non-communicable diseases (NCD) rank highest in Japan and communicable diseases (CD) highest in South Africa. These differential profiles represent an opportunity for collaboration and many potential areas for research in NCDs such as ischemic heart disease, stroke and cancer, and CDs such as lower respiratory infections (including the increasing ineffectiveness of antibiotics). The Medical Research Council (MRC) is working with a number of global partners on the development of new drug entities, genomic medicine and precision medicine, and addressing the challenges relating to the aging population. The latter is an important area of research in Japan where Alzheimer's is a major cause of mortality.

Health research in South Africa is taking place in the universities but also in private research facilities. Eight of the public HEIs have medical schools, and government-funded agencies such as the MRC, National Health Laboratory Service (NHLS), National Institute for Communicable Diseases (NICD), National Institute for Occupational Health (NIOH) and the Human Sciences Research Council (HSRC) are conducting research in their relevant fields. In addition, there are

private entities such as the Aurum Institute which works in the areas of HIV Aids and TB, the Centre for the Aids Programme of Research in South Africa (CAPRISA) and pharmaceutical companies involved in research and clinical trials. The FARMOVS unit at the University of the Free State is a world class clinical research facility that is accredited by the United States Food & Drug Administration (FDA) and met Japanese and other global benchmarks.

Established as far back as 1969, the SAMRC comprises a number of research units (both internally and located in universities or other research entities), offices and platforms, and an innovation entity. The council is currently involved in a number of international collaborations, such as with the National Institutes of Health in the United States, and has agreements with Swedish research organisations and the British Medical Research Council. As the premier research funding entity in South Africa it also has links with all the country's universities.

Key strengths in the area of health and wellness in South Africa are its world class health researchers and facilities; range of health research institutions; good administrative capacity to support collaboration; and strong track record of leveraging and managing funding and delivering outputs. In economic terms, the exchange rate also has a positive impact on funding from abroad.

3.1.2 Prof Noboru Minakawa Nagasaki University

As an example of a collaborative project in the area of health and wellness, Prof Minakawa gave a slide presentation on an ongoing project aimed at establishing an early warning system for malaria in Southern Africa.

The project involves participants from Nagasaki University, Tokyo University and the Japan Agency for Marine-Earth Science and Technology (JAMSTEC) in Japan; the University of the Western Cape, the Limpopo Department of Health, the Council for Scientific and Industrial Research (CSIR) and the SAMRC in South Africa; and a researcher from the University of East Anglia in the United Kingdom. Prof Minakawa expressed his thanks to Ms Eudy Mabuza of the Department of Science & Technology for the support for the project.

Data shows that recent climate changes associated with food shortages and both flooding and drought, have resulted in an increase in outbreaks of communicable diseases and a decline in the effectiveness of medicines to address them. A decline in malaria cases in South Africa around 2011 was followed by an increase again. Limpopo Province is a malaria hotspot and the number of cases in that region has risen sharply in recent years.

This project is developing a malaria outbreak prediction model that incorporates the impact of a variety of climatic factors in order to predict outbreaks of malaria that are predominantly affected by climate conditions. The ultimate aim of the research is to build an early warning system that allows for the implementation of effective preparatory countermeasures. The project forms part of the Science and Technology Research Partnership for Sustainable Development (SATREPS) and has the support of a number of funding agencies.

Super computers are being used to predict climate change six months to 12 months ahead and as far as possible in specific regions. In this way future climate trends have been added to the prediction model of studying past climate and case data and some very good accuracies are being achieved for prediction purposes. Machine learning (or artificial intelligence) has also been applied to good effect using local variables.

The model successfully predicted the last two outbreaks of malaria, which is an excellent result. It was very encouraging to see local government uses the information provided as a basis for interventions such as double spraying, particularly in hot spot areas. There is now a more automated system for communicating data via mobile phones, and the public can also input information to the free cloud system. Other good news is that the partners have agreed to establish an infectious disease early-warning system (iDEWS) Bureau.

3.2 Key areas of human security and social justice research

3.2.1 Dr René Smith
Durban University of Technology (DUT)

Dr Smith made a plea for the rejuvenation and reinvigoration of support for the arts, humanities and social sciences in order to address critical questions about human beings and their lived experiences in the context of a networked and technology-mediated world.

The future of fiction and popular culture has arrived. The world of big data, machine learning, artificial intelligence, algorithms, the internet of things, robotics and virtual reality is a world of possibility that promises hope and prosperity but also posterity. The human being is required to adapt more and more quickly whilst simultaneously retaining human dignity.

In this world of innovation and infinite possibilities there are also serious interconnected grand societal challenges including inequality, poverty, hunger and threatened job security. It is a world in which avoidable infant and maternal mortality and gender inequality persist. The environment and ecosystem that sustained generations of peoples, including first world nations, is dissipating. Wars are increasing and conflict over food security and water security will also soon be an issue. The political right is gaining ground and appealing to a populace desperate to retain power and control and dominated by the “big man” syndrome. We are living in a world of political extremism, xenophobia, hate crimes, the denial of women’s rights and human insecurity of epic proportions.

Whether in South Africa or Japan, the challenge now is to ensure that the human experience is an inclusive one - economically, politically, socially, personally and environmentally. The moment demands increased focus on human lived experiences, revisiting the importance of ethics and morality, and reflecting on our own prejudices, fears and vulnerabilities. It demands that we speak up against all forms of injustice, prejudice and stereotypes.

The role of the universities is critical in this context. The humanities and social sciences are important role players reminding us what it is to be human, an ethical being, conscientious in our choices and considerate in our decisions. They are knowledge fields that allow us to engage with and question all these challenges and remind us that the price of silence is too high. We should be strengthening these disciplines instead of closing down departments and faculties. We should be employing people to help us make sense of the world we face and and training and reskilling young people to be productive members of society and able to adapt to the 4th Industrial Revolution.

While the conference papers on the theme of human security and social justice would be sure to provide much insight, Dr Smith noted that she would like to see more inter-, multi- and transdisciplinary research on issues such as the intersection of the human being, bots and culture, and the impact of the 4th Industrial Revolution on the human lived experience, freedom in the age of augmented experiences and the ethics and morality peculiar to this particular moment in time.

3.2.2 Prof Shuhei Shimada
Nagoya University of Foreign Studies (NUFS)

In his presentation Prof Shimada focused on the pervasive and persistent human security and social justice challenges involved in land reform and land rights across Africa. For more than half a century there have been many strategic plans for economic

development and political democratisation but human security and social justice remain at the centre of the continent's problems.

Globalisation has had a major impact on African society. Following the first wave of globalisation in Africa, the movement of people, goods and information increased dramatically. In the late 1970s many African countries faced defaulting on their debts and were compelled to launch Structural Adjustment Programmes (SAPs) which were accompanied by a number of conditions including market liberalisation, subsidy reductions, currency devaluations and public sector budget cuts.

Prof Shimada's research in rural Nigeria since the 1980s has shown that farmers are more vulnerable since the introduction of the SAP. Young people make no effort to find work despite having studied for a number of years. Political democratisation in Zambia in the 1990s made it possible for local authorities such as chiefs and village headmen to exercise more political power to the detriment of farmers. These findings indicate that market globalisation and political democratisation lead to greater vulnerability of farmers.

In the 1990s, addressing poverty became a matter of urgency. In September 2000 world leaders came together in Africa to adopt the United Nations Millennium Development Goals (MDGs) as a new global partnership aimed at resolving extreme poverty by 2015. One year later, the New Partnership for Africa's Development (NEPAD) was launched as a driver for African countries to achieve the MDGs. The main objective of the NEPAD was to reduce poverty and put Africa on a path to sustainable development but extreme poverty still remains the primary challenge in many parts of the continent.

In 2015 the Sustainable Development Goals (SDGs) were set up with the aim of banishing a host of social ills by 2030. This global development strategy differed from conventional strategies in that it stressed the donor-recipient relationship and the expectation that the private sector would play a bigger role in investment and development. Consequently, governance has become a central issue among investors and donor countries.

Since 2000, many African countries have enacted land reform and land rights acts, mostly aimed at the privatisation of land and clarification of legal procedures around land transactions. In accordance with the aim of the NEPAD, traditional or communal land rights were legalised in some countries. The purpose of this formalisation was not to defend communal land rights but to use the power of traditional authorities to facilitate land transactions without political interference. It seems that neither government nor traditional authorities stand for or defend the tenant farmer's right to access and own land. Consortiums are formed comprising international investors, donor countries and African government officials and politicians. This is a good opportunity for foreign investors to expand their business in Africa but raises the question of who is defending the rights of tenant farmers. While governments recognise the importance of access to land, many of them have, in fact, introduced new land policies which legitimise the commodification of land and the issuing of freehold and leasehold titles with the consent of local authorities.

Studies have shown the extent to which pastoralists have suffered disproportionally in Africa and been exposed to increasing poverty. They have even been dispossessed of their land and forced to settle in certain areas, and their respected role as custodians of the commons has been denied or neglected.

African tenant farmers have a great ability to cope with uncertainty and show high spatial and social mobility in the face of difficulties. This multi-talented character conceals the gravity of their daily life challenges and stops them from disclosing the real problem. Traditional authorities were once trusted by local people as guardians of the commons but they ceased to be custodians following the shift towards market liberalization and are now subservient to government officials or politicians. In this process, tenant farmers have been deprived of their access to land.

The UN General Assembly adopted a Tenant Rights Declaration in December 2018 but many countries, including Japan, abstained from voting. In thinking about security and social justice in Africa, the plight of these people must receive more attention.

3.3 Key areas in growth, exploration and conservation

3.3.1 Prof Zeblon Vilakazi
University of the Witwatersrand (Wits)

Prof Vilakazi noted that as a physicist he was not an expert in this area but would address the aspect of knowledge inequality which spoke to growth in general and which ultimately led to the wealth inequality mentioned by some of the previous speakers.

Knowledge has a multiplier effect on future growth and prosperity, and the Japan-South Africa collaboration has a role to play in addressing the challenge of increasing knowledge generation. On a knowledge production density map of the world Africa is just a thin sliver, with a small bulge at the southern tip illustrating that about 30% of the continent's research comes from South Africa.

Despite their unique histories and the fact that they are so far apart, there are similarities between Japan and South Africa. Japan experienced rapid social, political and economic changes at the time of the Major Restoration in the mid-19th Century which fast tracked the country into the industrial area and a position of global power. That was followed by a tumultuous period culminating in the period of reconstruction after being the target of methods of mass destruction during World War II. Now Japan produced the most Nobel Prize winners in the Asia Pacific area and was home to the highest ranked universities in Asia – according to the Shanghai Ranking. This is indicative of the growth the country has experienced in social, political and academic spheres.

At the same time as Japan's Major Restoration, the discovery of diamonds and gold in South Africa led to rapid industrialisation and huge sociological shifts among indigenous people, with new labour laws having a major social impact on communities in the country. South Africa's post-apartheid reconstruction is taking place 50 years after the Japanese post-war reconstruction, but it also now has the highest ranked universities on the continent and produces the most African Nobel laureates.

The collaboration between Japan and South Africa can therefore be seen as a collaboration of equals in an unequal world. The fields in which partnerships are and can potentially be forged are wide ranging and include business, economic sciences, natural sciences, development, heritage, area studies and politics. All of these involve research which could potentially have societal impact in both a local and global context. While the 4th Industrial Revolution is the big game changer in terms of research, the SDGs cannot be ignored.

Prof Vilakazi highlighted the following potential areas for collaboration:

- Developing the skills and capabilities of students with disabilities (which is very important in South Africa);
- Learning and intelligence in the age if AI;
- The politicisation of migration in the South African electoral discourse;
- How South Africa and Japan can use energy taxes to honour the Paris Agreement;
- Applying indigenous knowledge systems as resources for education and conservation;
- Deep level mining and science. In this regard, he specifically mentioned a deep mining seismological research collaboration between the University of the Witwatersrand and Tokyo University over the past 20 years which has been based on the respective strengths of the two countries and produced great benefits for both.

3.3.2 Dr Takahiro Fukunishi
Institute of Developing Economies-Japan External Trade Organisation (IDE-JETRO)

Dr Fukunishi's presentation focused on key aspects of the theme in the context of sub-Saharan Africa rather than the South Africa-Japan partnership itself.

After a few decades of stagnation, sub-Saharan Africa experienced a 10 year period of economic growth but this was not sustained as prices for natural resources fell in the international markets. The debates are now about strategies for sustaining growth, a topic needing extensive exploration.

The typical growth patterns found in many developing countries have not yet emerged in Africa. For example, the export of labour-intensive goods such as clothing has not been seen in sub-Saharan Africa in the 60 years following independence of these countries. Therefore, while there are increasing calls for industrialisation, proposed growth strategies remain diverse and divided.

The regeneration of African economies requires departing from the one size fits all policy recommended by international development organisations and exploring a strategy that considers the social and economic conditions of each country. Research in areas such as area studies, anthropology and political science can contribute to the design of tailor-made growth strategies for individual countries. The development of growth strategies also require a complex analysis of ongoing developments in ICT and related fields. New technologies such as artificial intelligence and the internet of things have enormous potential for delivering services to and removing the constraints experienced by people and enterprises in Africa, including small-scale farmers and workshops. The challenge is that technological changes are happening so fast and are so powerful that it is extremely difficult for non-specialists to imagine how new technologies can be incorporated into government services and private activities. It is not clear to most people what technologies can do and how they can be harmful or what will happen when more than two technologies are introduced into society simultaneously. In Prof Fukunishi's view, close collaboration between researchers in the natural sciences, social science and humanities can contribute to a better understanding of the role of technology in the future.

A recent study in Malawi showed that primary school interventions were more effective when parents were involved and understood what they were about. This was easily achieved through the use of new technology and ensured that the investment in the interventions was worthwhile. The study also revealed, however, that children exposed to the school interventions were more likely to stop schooling, which the author ascribed to the impact of the information technology intervention. While this is an overly simple example, it shows that disadvantaged people are so vulnerable that they can easily be harmed through the misuse of technology that was originally designed to help them out of poverty. The expectation is that science will use technology to assist the most disadvantaged people.

Where economic growth has taken place in Africa, it has been accompanied by drastic societal changes and a significant impact on the natural environment. Science needs to contribute to conservation stability by helping society speedily achieve a new equilibrium. Economic growth is always accompanied by a tremendous migration of people from rural to urban areas. Infrastructure is critical for maintaining stable governance in a population with high ethnic, language and religious diversity which may increase tensions between groups of people. Interestingly however, it has been pointed out that despite urbanisation, the proportion of people working in agriculture in Africa remains higher than in other developing countries. The experience in the rest of world is that sustained economic growth is accompanied by the transformation of the economy from agriculture to other sectors.

To deal with the coming dramatic changes in African countries, applied sciences are expected to contribute to preserving stability in society. Innovative technologies have the potential to effectively resolve the constraints experienced by poorer people and ensure fair opportunities for all through universal education and the equal distribution of wealth.

Prof Fukunishi concluded by saying that the SAJU 4 forum was an important opportunity for each delegate to expand their curiosity beyond their specialty areas with a view to ensuring a better future for African countries.

Concluding the session, the Chair remarked that the presentations highlighted not only the fact that there was already a great deal of collaboration taking place on which to build but also the importance of ensuring that funding is structured correctly. He also noted that the value of integrating the human and social sciences into the hard sciences was often underestimated.

4 MEETING OF HIGH LEVEL DELEGATES

A meeting of high level representatives from government, academia and funding agencies took place on the first day of the conference in which a number of important strategic approaches going forward were raised. Important issues were raised and recommendations made, a number of which also found expression during conference plenary discussions. These included the following:

- It was time for the universities to adopt a new mission and recognise the special role they could play in the broader relationship between Asia and Africa by conducting good research and producing the next generation of leaders. In the context of seeking solutions to global challenges, SAJU should broaden its scope to include the African and Asian regions. It was a strength of the forum that it was about building relationships among a number of institutions and across disciplines. Building a new generation of leaders also spoke to a regenerative role for SAJU itself, for example by setting conferences programmes that included sessions dedicated to and run by the younger generation. As a forum SAJU must be bold enough to inspire others.
- There were challenges that would not be solved by doing research in the same way as before and there must be a very deliberate drive to build a generation of global scholars who did not think of themselves as Japanese or any other nationality but as human beings in an interconnected world.
- Economic growth was the most important imperative for research today and the universities had to adjust their view that research for science was their primary purpose. Research needed to be translated into innovation. Building a relationship with commerce and industry was crucial, not only in terms of accessing research funding but also in terms of having impact. SAJU could be the meeting point for academic engagement with the higher social context. Public private partnerships (PPPs) between academia, business and government were the new trend among research funders globally.
- A new way of thinking about and mending society was also important yet society was a missing element in PPPs. Inclusiveness and leadership were also in themselves fields of research. This all spoke to developing whole humans in order to develop the future and the universities should adopt new theoretical models in order to meet societal needs. There was also a need to think about how to build a culture of entrepreneurship based on individuals. Innovation tended to be seen as driven by systems rather than individuals.
- Policy should also be expanded internationally to support open innovation. The new internationalisation policy in South Africa spoke to non-traditional approaches to the region, the global South and the world, including the idea of expanding SAJU to draw in Africa and Asia fitted into this. Quadrilateral partnerships were needed to support forums such as SAJU. Equality needed to be built into inter-regional partnerships so that there was reciprocal benefit and mutual responsibility. What indigenous knowledge had to offer should also not be ignored.
- From a broader government perspective, the political and economic relationship mattered a great deal. Implementing the new White Paper on Science & Technology would require a very integrative approach and much more systematic planning. In this regard SAJU was a unique platform whose potential still had to be fully exploited. Government was fully committed to supporting and investing in research but in the face of limited funding, needed to know that it could invest strategically so that there was scientific impact that addressed South Africa's National Development Plan and the SDGs. One could start by stratifying projects with societal, economic and environmental impact, with human development as a cross cutting factor.

5 INDUSTRY ROUND TABLE

The round table discussion was facilitated by Prof Nicola Kleyn, Dean of the Gordon Institute of Business Science (GIBS) and included the following participants:

- Prof Justin Barnes, Executive Director of the Toyota Wessels Institute for Manufacturing Studies.
- Dr Katsumi Hirano, Executive Vice-President of IDE-JETRO.
- Mr Iwasuke Shimada, Managing Director of Toshiba Africa.
- Prof Masafumi Nagao, Visiting Professor at the University of Pretoria, was also asked by Prof Kleyn to make inputs from the floor based on his deep knowledge of entrepreneurship.

Prof Kleyn opened the discussion by noting that conducting research that was relevant to both academia and industry. It required some understanding of the business context and success was ultimately dependent on aligning business with the policy environment and academia in both Japan and South Africa.

Dr Hirano gave a presentation on the Japanese grand policy on industry-academia collaboration, noting that while there were strong longstanding ties between government and research in Japan, academia had only started collaborating with industry after World War II. Policy reform had been accompanied by university reform and the universities were now expected to contribute to industry.

Dr Hirano commented that the automotive industry had been the mainstay of the relationship and investment between the two countries and diversifying to include other industrial sectors could have a very positive impact on employment which was of specific significance for South Africa. Mr Shimada spoke about how the Toshiba International Foundation, a non-profit organisation in its 30th year, promoted cultural exchanges, offered grants, and organised and sponsored symposia and seminars with the aim of enhancing international understanding of Japan. Toshiba was also committed to partnering with local and international entities, providing localised products and solutions in Africa, and promoting skills development and education.

Prof Barnes defined the current industrial context as "green, lean and unseen" – i.e. having to (1) grow employment and productivity capabilities in a sustainable manner, (2) drive operational efficiency and produce benefits that contribute to social cohesion and wealth in communities, and (3) deal with the uncertainties inherent in the new cyber-physical environment of production, augmented reality, digital twinning, smart materials, machine learning, robotics and the like. The real issue was to think about how South Africa and the sub-Saharan African region could participate in global value chains as major contributors of value addition, not just as users. Prof Barnes also emphasised that there was no such thing as economy, only political economy so there was always a key government interface in transactions. The manufacturing ecosystem within which firms operated included policy and regulatory elements as well as programmatic elements of sharing resources and technologies and setting up institution-to-institution collaborations. The challenge in this dynamic was that both right and wrong economic decisions had consequences. Government had the responsibility of enabling academia-industry collaboration and ensuring that any form of economic activity was for the good of society.

Prof Nagao highlighted the need for entrepreneurship education, not only for business but for government and academia itself. If the three sectors were to achieve any form of like-mindedness, the universities must also have an entrepreneurial orientation. Dr Hirano commented that innovation could offer the younger generation a bright future and the universities could contribute socially, financially and technologically to the establishment of start-ups.

Prof Kleyn concluded the discussion by saying in addition to reflecting on how the points raised could translate into scholarly research and curricular reform, the universities should not forget their important convening capability. They also had a critical role to play in deepening inter-institutional engagement and making sure that they were always open to cooperation with business, government and other key stakeholders.

6 COLLABORATION AND STUDENT MOBILITY

6.1 Presentations by universities

University of Johannesburg (UJ)
Mr Lebethe Malefo

UJ started embedding internationalisation in all its activities as far back as 2011 and set up its Internationalisation Division to promote partnerships in the region and across continents with both traditional and non-traditional partners. To promote intercultural competence and increase diversity in the classroom and on campus, the university's Study Abroad programme offered short programmes and semester mobility and had facilitated the inbound and outbound mobility of over 1 400 students in 2018. UJ also offered a join Master's in Global Studies in Sports and Movement with the University of Tsukuba.

University of the Witwatersrand (Wits)
Dr Mahomed Moolla

Wits was a research-intensive university and its internationalisation strategy was therefore aimed at supporting research through facilitating strategic partnerships with other universities, hosting inbound international visits and offering pre- and post-award activities. The university hosted 2 500 international students (8% of the student population) in 2018, many of whom came from other African countries. The aim was to increase this number and to promote semester programmes for Wits students at other universities. Wits had started fostering relationships with non-traditional partners in Africa, Asia and South America seven years ago, and a number of successful research partnerships had been established in India, China, Russia and Brazil. With the goal of having 33% international students by 2022, the next focus would be on the Middle East, Japan and Malaysia.

Some of the collaborations with members of the African Research Universities' Alliance (ARUA) were for pure research and normally involve individual academics. There were also joint and dual Masters and PhD degrees, although mostly in Europe at this stage, and joint applications for funding, mobility agreements and post-doc appointments. Wits had a number of existing links with Japan including amongst others the University of Tokyo, Akita University, Soka University, the National Institute of Infectious Diseases and Yokohama National University.

University of Pretoria (UP)
Mr Setsipane Mokoduwe

Internationalisation at UP was anchored in international partnerships, student exchanges and staff exchanges. Many of the partnerships over the past five years had been at researcher-to-researcher level but there were also a few formal partnerships with Japanese institutions. Researchers were encouraged to partner on projects that would yield mutual benefit and there were a number of incentives for inbound and outbound international exchanges. The numerous co-authorships and publications in conjunction with universities in other countries suggested a strong foundation in the university for building stronger relationships going forward.

In 2018, about 4 000 of the 53 000 strong student population at UP were international students. Of those, 55% were postgraduate students. Between 400 and 500 students annually were hosted on international semester exchanges. The university had 246 active agreements globally, was an active partner in ARUA and was pursuing bilateral and multilateral partnerships, both formal and informal. The university also hosted the only Centre for Japanese Studies in South Africa.

Durban University of Technology (DUT)
Prof Ewean Innocent Davidson

DUT was one of five universities of technology in Africa offering Doctoral degrees. It had 16 major research focus areas across all disciplines from the Natural Sciences and Social Sciences to Information and Communication Technologies and Arts and Design. The space science research activities which spanned several faculties in the university and niche areas relating to the 4th Industrial Revolution were good areas for possible collaborations with Japan. There was already a collaboration with Fukuoka University in Japan and industry partners in Canada.

J.F. Oberlin University
Mr Nobuo Kanda

J.F. Oberlin University was a private institution which, through its Exchange and Study Abroad Programme, offered around 750 foreign students annually an opportunity to learn about and experience Japan in a supportive environment. Students from over 170 partner schools in more than 20 countries participated in language study and academic programmes but also obtained practical experience through volunteer and internship opportunities. Students underwent a placement test and could spend from six months to a year in Japan. There was also a four-week summer school that would be attended by 70 students in 2019. There had as yet been no applicants from Africa.

The university had five overseas offices to carry out international exchange activities and to support its students who were studying abroad. The goal was to be a “globalised university” by 2023 through dispatching 25% of the institution’s undergraduate students and accepting the same number of students from overseas. Through SAJU the university hoped to build a new network of partner schools and expand its collaborative activities.

Doshisha University
Dr Mari Lizuka & Dr Hisae Nakanishi

The university’s Graduate School of Global Studies had been in existence for 10 years and offered programmes aimed at creating connectivity, promoting critical thinking and establishing collaborative research centres. The school offered American Studies, Asian Studies and Global Society Studies and had an interdisciplinary approach.

A Global Compact Network project headed by a South African student was connecting global youth to businesses in Japan. The idea was to provide a conduit for broader and less skewed information about other countries than was available through the traditional media. The project was a platform for students to influence corporate thinking and share their concerns and personal experiences. Diversity played a major role in innovation (which was key to achieving the SDGs) but was not a strong element of Japanese business and society. The project could also be the basis for open innovation efforts by international students and Japanese corporations through idea generation and business creation events. South Africa could act as an African hub for students working towards the SDGs.

International Christian University
Prof Mikiko Nishimura

The International Christian University was Japan's first Liberal Arts College and offered very interdisciplinary programmes which attracted high quality international students. Academics from 18 other countries made up 40% of the faculty cohort and 10% of the student population consisted of international students, including students from African countries. As such, the university was bilingual.

The university offered Service Learning which was an educational approach that gave students the opportunity to apply their learning practically in a community. A reciprocal and mutually beneficial relationship with communities (at both individual and institutional level) was emphasised. During a 30 day stay in a community in a country in the Pacific region, students learned to understand and appreciate cultural differences and structural inequalities and revisit their own thinking. Students from partner universities in Asia and the United States were also invited to Japan. There were as yet no partnerships with institutions in Africa but they would be very welcome.

Tokyo University of Marine Science and Technology (TUMSAT)
Prof Mitsuru Izumi

TUMSAT had three undergraduate schools, namely Ocean Sciences, Marine Resources and Energy, and the new School of Marine Resources and Environment. With the support of government, the university was developing human resources with the expertise to contribute internationally to oceanic research and exploration and the sustainable use of oceanic energy and sea floor resources. TUMSAT was also working in collaboration with SADC countries to enable collaborations between talented individuals in the marine science areas.

Candidates were invited to apply for the three-year PhD programme in Applied Marine Environmental Studies in TUMSAT's Graduate School. Twelve candidates would be accepted, including four self-funded international students.

Tsukuba University
Prof Takahiro Morio

Situated in Tsukuba Science City, the university's mission was to develop individuals who could contribute to solving the global issues of the day through research and education. The Sustainability Science, Technology and Policy programme, a Bachelor's Programme in Global Issues and a Graduate Programme in Life Science Innovation were three examples in this regard.

Tsukuba University's Graduate School offered transdisciplinary graduate programmes including a Cooperation Programme for co-supervision and a Master's Programme in Sport and Olympic Studies in cooperation with Utrecht University and the University of Johannesburg. This programme provided students with a joint learning journey of three four-week visits to a country in order to experience different perspectives on sport for development, education and research methods, and management of diversity.

The university established an office in Tunis in 2006, had been a member of the Alliance for Research on the Mediterranean and North Africa (ARENA) since 2004, and participated in the SATREPS programme. In terms of institutional academic networking, it had also participated in a number of summits and networks, including SAJU.

Tokyo University of Foreign Studies (TUFS)
Prof Shinichi Takeuchi

Established in 1873 as a university of foreign languages, TUFS today aimed at connecting resources worldwide, particularly in areas studies and the humanities and social sciences. The university was relative small and specialised which made it very functional. It offered undergraduate and graduate programmes in Japanese language and culture, undergraduate programmes in the humanities and general social sciences, and a graduate programme in peace and conflict studies. Students could major in 27 languages and in area studies covering 14 regions across the world.

TUFS had MoUs with 11 universities in Africa and was committed to building research and education relationships and expanding its network on the continent. In particular, there had been a number of student and staff exchanges with the University of Pretoria.

6.2 Discussion

In the discussion that followed the presentations, it was observed that in addition to their diversity, the institutions varied in terms of the level of differentiation. Modalities for collaboration would be guided by the focus and strategy of the universities involved which could change over time.

There were only 26 public HEIs in South Africa which varied in terms of their focus and research intensivity as compared to 800 universities in Japan, of which 25% were private. This, by default, led to specialisation and there was perhaps an opportunity for Japanese higher education as a system to broaden its engagement. Dr Aldo Stroebel, who chaired the session, noted that focus and economies of scale had been identified as one of the themes to consider to achieve a more inclusive SAJU Forum but without losing its focus.

There did not seem to be much of a focus on undergraduate student exchanges which were very important or a dedicated position on linking research to graduate exchange which was intriguing in light of the broader link between internationalisation and graduate study. One would like to see a pipeline and a greater focus on the notion of the global citizen (as found at the International Christian University) which was something that could start at undergraduate level.

There were repeated references to broader research collaborations arising out of personal relationships and one-on-one contact between researchers but it took years for such strategic partnerships to develop. One would like to see such broader collaborations and strategic partnerships starting to emerge from the SAJU Forum.

Perhaps there were cultural barriers to understanding the specifics about research areas in which Japanese universities were interested in collaborating in and how such partnerships could be facilitated by internationalisation practitioners at South African universities. The SAJU Forum could play a role in navigating such barriers in order to lessen the reliance on chance meetings and personal relationships between researchers.

The research agencies which were associated with but were separate from the universities were also key role players in promoting collaboration and must be included in the establishment of partnerships. The fact that the funding landscape was quite complex would influence how collaborations were forged. Thought should also be given to how additional networks and other alliances could enhance the SAJU Forum's intentions for universities in the two countries. Private sector engagement for example was an innovation that could escalate things beyond existing normal exchanges.

A further dimension to consider was that of regional responsibility and the potential benefits that regional partnerships in both Africa and Asia could bring. This would be elaborated on in the later presentation by Dr Stroebel (NRF) and Mr Kobayashi (JST) on the new initiative for promoting research partnerships through the incorporation of other universities across the African continent.

7 MODALITIES FOR RESEARCH SUPPORT FOR COLLABORATION AND STAFF AND STUDENT MOBILITY

Representatives of the following entities presented on the funding and other support they provided for academic collaboration and mobility.

7.1 Presentations by funding and other entities

Japan Society for the Promotion of Science (JSPS)
Mr Noriyoshi Masuko

The society had an international programme for supporting research mobility and establishing robust cooperative research networks. This was done by supporting international joint research and seminars, providing international training opportunities for young researchers, inviting researchers to Japan and sending young Japanese researchers overseas, and in general supporting the globalisation of Japanese universities.

Japan International Corporation Agency (JICA)
Mr Tomohiro Seki

The JICA ran Japan's Official Development Assistance programme which offered diverse technical cooperation, grant aid, financing and investment opportunities in over 150 regions and with 30 offices in Africa. One of JICA's technical collaborations with academia was the SATREPS, a joint research programme for enhancing collaboration in science and technology and the development of new technology, knowledge, innovations and capacity.

Japan Agency for Medical Research and Development (AMED)
Dr Ryo Takagi

Through centralising grants in the field of medicine, the AMED scheme offered ongoing funding and seamless support for basic research from inception to clinical application. Integrated research and development projects were promoted through five cross-sectional and four disease area-specific projects.

International Education Association of South Africa (IEASA)
Ms Vinay Rajah

Established in 1997, IEASA was a non-profit organisation representing and advocating for institutions and entities participating in the internationalisation of South African higher education. Currently focused on the public higher education sector, there were discussions about broadening the member base to include the TVET colleges and private higher education institutions.

Through its connections with entities that had access to funding, IEASA supported the bringing together of entities engaged in international tertiary educational exchanges and acted as a conduit for information about international opportunities for its members. An important component of the organisation's connections was the tripartite alliance between the Departments of Home Affairs, Trade & Industry and International Relations & Cooperation. IEASA also enjoyed the support of many local, regional, and intra- and extra-continental partners, such as USAf, the Association of International Educators in the United States (NEFSA) and the European Association of International Educators (AEIA).

Department of Higher Education and Training (DHET)
Dr Whitfield Green

The Department's new University Capacity Development Grant (UCDP) did not fund research per se but could be used for research capacity development through the Staffing South Africa's Universities Framework (SSAUF). This included a number of structured programmes that comprised opportunities for mobility or interaction with other agencies. The DHET's participation in the African Business Education (ABE) was proving to be very successful and a conversation with the Ministry of Education, Culture, Sports, Science and Technology (MEXT) would be taking place around how to position this scholarship programme as well as other ways to develop academics through collaboration with Japanese scholarships.

From a South African perspective, what was needed was a joint strategy and joint funding. The organic nature of the SAJU process was a very rich way of promoting collaboration but perhaps a more structured approach that incorporated all the sectors would make it possible to integrate resources so that more institutions could participate in the benefits. A programmatic top down approach could enhance what the SAJU Forum was doing and help to focus all South African agencies and bodies in one direction for greater impact.

AJ-CORE Science (African-Japan Collaborative Research on Environment Science)
Mr Osamu Kobayashi (JST) and Dr Aldo Stroebel (NRF)

AJ-CORE was a new joint initiative of the Japan Science & Technology Agency (JST) and the National Research Foundation (NRF). Science and technology were increasingly important in tackling regional and global issues in Africa and contributing to the SDGs. Recognising the abundance of promising young R&D practitioners and the excellent work being done by existing funding mechanisms that were ready to support STI activities, JST was taking steps to enhance its cooperative actions with Africa.

A number of funding and research support agencies participated in a workshop on Japan-Africa equal partnership in science, technology and innovation for sustainable development in Dakar in December 2018. In order to put the outcomes of the workshop into practice, JST and NRF were developing a brand new Japan-Africa cooperation framework based on including at least one principal researcher from another African country as a third member of the team in every joint Japan-South Africa research project. Increasing the number of stakeholders in this way would offer deeper insight into common regional issues.

The new scheme involving the NRF, JST and the Science Granting Councils Initiative (SGCI) would support the co-creation of conceptual direction and research goals, always informed by the policies and rules in the various countries. This approach to collaboration was about co-investment and the pooling of resources as well as joint evaluation. There would be a very strong focus on including participating African countries in joint panels right from the start to evaluate the excellence and fitness for purpose of research, also from a funding perspective. The next meeting of the Global Research Council would take place in Durban (its first meeting in Africa). The opportunity would be used to highlight the number of research engagements taking place through a networked funding approach with many of the funding partners here. Networked funding of the broader landscape differed from the usual funder-to-funder or government-to-government approach. The focus, in future, would be on collaboration and a multilateral approach with geographical regions working together. This immediately also implied a multi- and transdisciplinary approach and networks not only of funding partners but also of countries, universities and research organisations.

All universities in South Africa and Japan and all public universities from 15 African countries would participate and greater participation on the part of industry and the private sector was also expected. This would form a unique basis for future collaborations.

The scheme was closely aligned to the SAJU Forum's vision of increasing multilateral engagement with a view to enhancing value addition in terms of the nature of projects and innovative upscaling and investment in research results rather than the traditional approach of simply funding a new round of projects.

The NRF would soon formally announce a large programme called the Global Knowledge Partnership which was premised on making it mandatory for every PhD student and postdoc fellow funded by the NRF to spend at least six months abroad. The NRF would rely very heavily on its existing partnerships to make this larger programme a reality.

8 CLOSURE

8.1 Feedback from the thematic sessions

8.1.1 Health and wellness
Prof Lionel Green-Thompson (Sefako Makgatho Health Sciences University)

The presentations given in this session were related to public health, education and human resource development as well as indigenous knowledge systems, and the eclectic mix provided much food for thought. Some reported on existing productive partnerships, others on work in progress and yet others suggested possible new collaborative spaces.

Three main themes emerged. The first was the systemic challenges to the management and control of both infectious and non-communicable diseases in a manner which allowed for wider participation. The second was the variable approach to educational techniques for new teachers, such as the Lesson Study, and the challenges experienced by early career academics. The third was entomophagy, with papers on indigenous knowledge highlighting the development of the insect ecotourism industry in Japan, something that was new to South Africa but held great potential for the country.

8.1.2 Security and social justice
Prof Takahiro Morio (Tsukuba University)

The papers presented in this session were extremely diverse but one aspect that was certainly highlighted was the challenges experienced by marginalised segments of society. These included issues of security, poverty, migration, energy, resources, inequality and many others.

The general feeling was that what was needed was not cutting edge global technological interventions but rather interventions that were indigenous, decentralised, informal and transdisciplinary, and at local or regional level. This could be encapsulated in the theme: “think locally, act regionally and leverage globally”.

8.1.3 Growth, exploration and conservation
Dr Thulani Makhalanyane (University of Pretoria)

A wide range of fields was covered but with some focus on microbiology. Overall, the emphasis was on multidisciplinary and collaborative research and economic opportunities between the two countries. Many of the presenters were already involved in such projects and were thinking about how to continue them. Some presenters highlighted the cultural value of the collaborations between the two countries. Several of the outputs included student exchanges and joint publications, and mention was made of the impact of South Africa-Japan collaborations beyond the borders of the two countries and the fact that South Africa in particular could share results and innovations with other African countries.

It was suggested that future collaborations should focus more on environmental and economic sciences and the lack of funding for research in these fields was emphasised. The South African presenters pointed to the importance of collaborative networks for the training of students and early career academics. Lastly, the importance of leveraging the geographical locations of South Africa and Japan was emphasised, with South Africa’s strategic marine environments and active mines mentioned as examples.

8.2 Joint Statement

PREAMBLE

1. In the globalized world of the 21st Century, humanity faces complex challenges relating to the human condition, the human-earth nexus and pervasive challenges in international relations; all simultaneously with local and global implications. In order to collaboratively work towards the concept of sustainable development, dedicated cooperation across sectors and disciplines, and regions and countries, is strongly required. In this sense, international academic cooperation is essential in the construction of a global knowledge enterprise and commons, and coordination and collaboration between academia, business communities, and government should be promoted.

2. Approximately 200 Japanese and South African participants convened for the Fourth South Africa-Japan Universities Forum Conference, held at the University of Pretoria, South Africa during 23 and 24 May 2019. Entitled The Human Being in the 21st Century in the Context of Global Changes, the conference gathered researchers, business leaders, research support organisations and government officials from a variety of geographical, social and cultural perspectives to deliberate on ideas, new constructs and current research. The theme of the Conference intended to optimise engagement across disciplinary borders. This Conference builds on the Third SAJU Conference held in Tokyo in 2017.

3. The SAJU Forum is positioned to promote cooperation and coordination involving a wide range of stakeholders from both countries, and specifically provide opportunities for researchers to explore relevant academic activities across disciplines. In addition, it functions as a valuable platform to enable universities, research institutes, funding agencies, and governments to engage in direct dialogue to construct diverse approaches to collaboration.

CONFERENCE STATEMENT

1. In order to make the role of the SAJU Forum effective and sustainable we, the participants at this Conference, declare to expend maximal effort to

    a. Motivate and promote the continuous and sustained cooperation and collaboration between stakeholders across different societal sectors (academia, industry and public) of both countries.

    b. Provide financial and organizational support for ensuring regular (periodic) organization of the SAJU Forum.

    c. Establish synergy between this initiative and the Framework of the Tokyo International Conference on African Development (TICAD) themes of common importance.

2. A key purpose of this collaboration would be to create the policy, funding and mobility infrastructure to facilitate

    a. Ongoing and sustained collaboration between Japanese and South African scholars working on projects of relevance to both of our societies and others.

    b. Attract cohorts of graduate students that will work in collaboration on these projects.

    c. Improve the mobility of South African and Japanese postgraduate and undergraduate scholars and students between universities.

3. Dedicated attempts will be made to build solidarity through scholarship between Japan and South Africa in the quest to improve the lives of present and future generations of humans.

4. Create the conditions to stimulate South Africa—Japan university-industry-government linkages with appropriate and ongoing engagement, positioning and dedicated mechanisms including inter-national mobility and inter-sector mobility.

5. SAJU activities will be galvanised through concerted strategies for collaboration between the universities and other knowledge-intensive institutions, government, funding agencies, industry and broader social formations.

6. SAJU will work as a platform to enhance the potential for broader collaboration between scholars and students in Japan, South Africa and other African and Asian societies.

7. SAJU projects will be driven by engagement in scholarly work shaped in the context of applications aimed at social wellbeing and sustainable economic growth and development. They will be supported by a set of transversal instruments such as

    - the use of the technologies
    - interdisciplinary and transdisciplinary methodologies

- postgraduate education that will contribute to the production of a new generation of global scholars

8. SAJU will constantly reach for the production of new values and new ideas. It will have an inspirational role in addressing the relationship between universities and society and hence knowledge and society.

The Forum was attended by the governments and agencies of South Africa and Japan, through the Department of Science and Technology (DST), Department of Higher Education and Training (DHET), the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Ministry of Foreign Affairs (MOFA), the National Research Foundation (NRF), Universities South Africa (USAf), the Japan Science and Technology Agency (JST), the Japan Association of National Universities (JANU), the Japan Society for the Promotion of Science (JSPS), the Japan Agency for Medical Research and Development (AMED), the Japan International Cooperation Agency (JICA), and the Institute of Developing Economies-Japan External Trade Organisation (IDE-JETRO).

In addition, together with the aforementioned, the following participating universities and research institutes participated in the discussion of this statement:

Akita University	Rhodes University
Asahi University	Rikkyo University / North West University
Central University of Technology	Ritsumeikan University
Doshisha University	Ryukoku University
Durban University of Technology	Shimane University
Gifu University	Soka University
Hiroshima University	Sophia University
Hokkaido University	Stellenbosch University
Institute of Tropical Medicine	Tokyo University of Foreign Studies
International Christian University	Tokyo University of Marine Science and Technology
International University of Japan	University of Cape Town
Kogakuin University	University of Johannesburg
Komazawa University	University of Pretoria
Kyoto University	University of South Africa
Miyagi University of Education	University of the Free State
Nagasaki University	University of the Western Cape
Nagoya University	University of Toyo
Nagoya University of Foreign Studies	University of Tsukuba
National Museum of Ethnology	University of Venda
North-West University	University of Witwatersrand
Oberlin University	Vaal University of Technology
Oita University	Walter Sisulu University
Osaka University	Yamanashi Gakuin University
Prefectural University Kumamoto	Yokohama National University

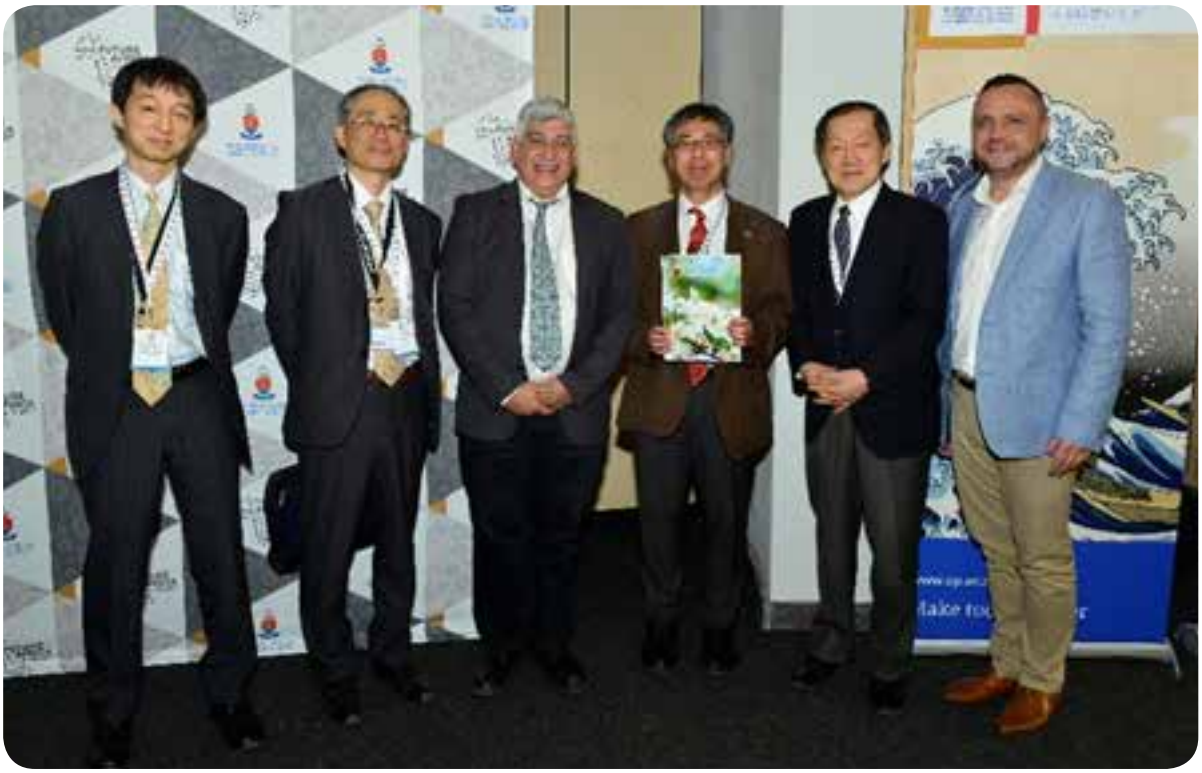
9 DELEGATES' FEEDBACK

The SAJU Planning committee compiled a survey to evaluate the conference experience of those that attended the conference. A comprehensive evaluation report is still being drafted.

Some preliminary responses from the survey indicate an overwhelmingly most positive response - 87% of delegates "strongly agreed" that the conference had met their expectations, and felt welcomed.

Some comments

- As a new researcher, the experience I had in SAJU, I am unable to compare it. It was excellent.
- I felt strongly that there is potential for expanding the educational exchange between SA and Japan.
- It provided a sound basis to proceed with strong collaboration.
- This was my first international conference and I was very pleased with the organizing of the entire conference.
- I have been collaborating very happily with Japanese scientists for 25 years, but it was interesting to hear about other projects, and also hear the views of Japanese industrialists of the challenges facing South Africa
- A very good platform for students and people who are in the research to meet and exchange ideas.



From left to right: Prof S Takeuchi, Prof J Matsukuma, Prof A Bawa, Prof T Morio, Prof M Nagao, Dr A Stroebel

APPENDIX ONE:
PAPERS PRESENTED AT THE SAJU FORUM 4

DAY ONE

SESSION 1: THE OPENING SESSION

Chaired by Prof Ahmed Bawa, Chief Executive Officer, Universities South Africa

Keynote addresses	Prof Tawana Kupe , Vice-Chancellor and Principal, University of Pretoria (UP)
	Prof Jun Matsukuma, Deputy Vice-Chancellor, Tokyo University of Foreign Studies (TUFS)
The importance of international scientific collaboration	Dr Daniel Adams, Acting Director-General, Department of Science and Technology (DST)
The importance of SAJU in Japan – South Africa Relations	His Excellency, Ambassador Norio Maruyama, Ambassador of Japan to South Africa
The Importance of International STI (Science, Technology and Innovation) Collaboration for the SDGs (Sustainable Development Goals)	Ms Mutsuko Yasuda, Director for International Cooperation, Ministry of Education, Culture, Sports, Science and Technology (MEXT)
The Importance of constructing global academic partnerships	Mr Mahlubi Mabizela, Chief Director, Department of Higher Education and Training (DHET)

SESSION 2: CONFERENCE OVERVIEW

Chaired by Prof Francis Petersen, Vice-Chancellor, University of the Free State (UFS)

Key Areas of Health and Wellness Research	Dr Niresh Bhagwandin; Executive Manager: Strategic Research Initiatives, South African Medical Research Council (SAMRC)
	Prof Noboru Minakawa; Nagasaki University
Key Areas of Human Security and Social Justice Research	Dr René Smith, Durban University of Technology (DUT), President of the South African Humanities Deans' Association (SAHUDA)
	Prof Shuhei Shimada, Nagoya University of Foreign Studies
Key Areas in Growth Exploration and Conservation	Prof Zeblon Vilakazi, Deputy Vice-Chancellor Research, University of the Witwatersrand (WITS)
	Dr Takahiro Fukunishi, Institute of Developing Economies-Japan External Trade Organisation (IDE-JETRO)

SESSION 3: PARALLEL THEMATIC PRESENTATIONS

HEALTH AND WELLNESS	SECURITY AND SOCIAL JUSTICE	GROWTH EXPLORATION AND CONSERVATION
SESSION CHAIRS: Prof Refilwe Phaswana-Mafuya **(North-West University -- SA)** Dr Yoshinori Ikenaka **(Hokkaido University -- Japan)** Prof Kazuhiro Yoshida **(Hiroshima University – Japan)**	**SESSION CHAIRS:** Prof Maxi Schoeman **(University of Pretoria --SA)** Prof Vasu Reddy **(University of Pretoria –SA)** Prof Shuhei Shimada (**Nagoya University of Foreign Studies -- Japan)** Prof Takahiro Morio **(Tsukuba University – Japan)**	**SESSION CHAIRS:** Prof Thandi Mgwebi **(Tshwane University of Technology – SA)** Dr Takahiro Fukunishi **(IDE-JETRO – Japan)** Prof Yohei Kawamura **(Akita University – Japan)**
Category: Public Health	**Category: Environment & Resource Management**	**Category: Natural Science & Development**
IMPROVING THE PUBLIC HEALTH SECTOR IN SOUTH AFRICA: ELICITING PUBLIC PREFERENCES USING A DISCRETE CHOICE EXPERIMENT **Honda, A** (Sophia University, Japan) Ryan, M (University of Aberdeen, United Kingdom) Van Niekerk, R (Rhodes University, South Africa) McIntyre, D (University of Cape Town, South Africa)	**LEARNING FROM SITUATEDNESS OF INDIGENOUS KNOWLEDGE: FROM CASE STUDIES IN FISHING REGIONS IN JAPAN** **Ikeguchi, A** (Yokohama National University, Japan)	**SA-JAPAN COLLABORATION IN EARTHQUAKE SCIENCE SINCE 1994** **Durrheim, RJ** (University of the Witwatersrand, South Africa) Ogasawara, H (Ritsumeikan University, Japan) Y Yabe, Y (Tohoku University, Japan) Manzi, M (University of the Witwatersrand, South Africa) Cason, E (University of the Free State, South Africa)
THE CHANGING FACE OF PREGNANCY IN SOUTH AFRICA **Bothma, S** (University of Pretoria, South Africa)	**BEYOND WAITING POLITICS IN CONSERVATION: FORESTS AND THE POWER OF THE MARGINALISED IN SOUTHERN AFRICA** **Matose, F** (University of Cape Town, South Africa)	**STUDY ON IMPLEMENTATION OF WI-FI DIRECT UTILIZING SMART MINING IN MONITORING STRESS STATES IN UNDERGROUND MINES IN SOUTH AFRICA** **Ikeda, H** Kawamura, Y, Mokhtar, NEBt, Yokokura, J, Cawood, F (Akita University, Japan)

HEALTH AND WELLNESS	SECURITY AND SOCIAL JUSTICE	GROWTH EXPLORATION AND CONSERVATION
RISK EVALUATION OF VECTOR CONTROL TO THE ECOSYSTEM AND THE HUMAN HEALTH IN A MALARIA CONTROL AREA **Ikenaka, YI** (Hokkaido University, Japan); Motohira, KM, Thompson, LT, Beyene, YB, Wepener, VW, (North-West University, South Africa); Smit, SN; Van Vuren, JvV;; Nakayama, SN and Ishizuka, MI (North-West University, South Africa)	**RESOURCE MANAGEMENT AND POLITICAL POWER IN RURAL AFRICA** **Takeuchi, S** (Tokyo University of Foreign Studies, Japan) Ntsebeza, L, Chitonge, H (University of Cape Town, South Africa) Sakai, M, Oishi, T, Matsunami, Y, Kirikoshi, H (TUFS, African Studies Center, Japan) Sato, C, Aminaka, A (IDE-JETRO, Japan)	**STABILIZATION OF BARBERTON GOLD MINE TAILINGS USING HIGH PERCENTAGE OF LIME (CAO): IMPROVE GEOTECHNICAL PROPERTIES OF GOLD TAILINGS FOR BUILDING & CONSTRUCTION** **Mkhonto, NE** Mashifana, TP, Sithole, T (University of Johannesburg, South Africa)
THE INFECTIOUS DISEASES EARLY WARNING SYSTEM **Sweijd, N A** (Alliance for Collaboration on Climate and Earth Systems Science, CSIR) Minakawa, N. (School of Tropical Medicine & Global Health, University of Nagasaki, Japan) & Behera, S.K. (Application Laboratory, Japan Agency for Marine-Earth Science and Technology, Japan)	**Category: Migration and Gender** **POLITICISATION OF IMMIGRATION IN ELECTORAL DISCOURSE IN SOUTH AFRICA** **Makino-Yamashita, K** (Institute of Developing Economies, Japan External Trade Organization, Japan) (Wits School of Governance, South Africa)	32 **CHARACTERIZATION OF WFGD GYPSUM AS A BY-PRODUCT AND ITS COMPATIBLE ADDITIVES FOR BUILDING AND CONSTRUCTION** **Mahlangu, DE** (University of Johannesburg, South Africa)
RELATIONSHIP BETWEEN INFANT FEEDING PRACTICES AND CAREGIVERS' NUTRITION KNOWLEDGE ON THE NUTRITIONAL STATUS OF INFANTS. **Pfumvuti, L and Napier, C** (Durban University of Technology, South Africa)	**MOBILITY WITH VULNERABILITY OF MOZAMBICAN FEMALE MIGRANTS TO SOUTH AFRICA: OUTFLOW FROM THE PERIPHERY** **Aminaka, A** (Institute of Developing Economies-Japan External Trade Organization, Japan)	**USING MICROBIOMICS TO UNDERSTAND BIOGEOCHEMISTRY IN THE PACIFIC AND SOUTHERN OCEANS** **Makhalanyane, T** (University of Pretoria, South Africa)
ANTHROPOMETRIC PROFILE AND DIETARY INTAKE OF AN EMERGING MIDDLE- INCOME COMMUNITY **Memela, SN and Napier, CE** (Durban University of Technology, South Africa)	**PRECARIOUS LIVELIHOODS AND CHANGING GENDER RELATIONSHIP AMONG CONGOLESE FEMALE MIGRANTS IN SOUTH AFRICA** **Sato, C** (Institute of Developing Economies-Japan External Trade Organization, Japan)	**UTILIZATION OF SPENT FOUNDRY SAND AND PLASTIC WASTE TO PRODUCE A BUILDING MATERIAL** **Matshavha, R** Mashifana, T, Sithole, T, Makhatha, E (University of Johannesburg, South Africa)

HEALTH AND WELLNESS	SECURITY AND SOCIAL JUSTICE	GROWTH EXPLORATION AND CONSERVATION
ARTIFICIAL INTELLIGENCE (AI) BRINGS INNOVATION IN DENTAL IMAGING DIAGNOSIS **Katsumata, A** (Asahi University, Japan)	**LIVING ON THE MARGIN? THE DEMOGRAPHICS OF POPULATION AGEING AND ITS IMPLICATIONS FOR SOCIAL PROTECTION IN AFRICA** **Tati, G** (University of the Western Cape, South Africa)	**RETHINKING THE GLOBAL ROLE AND SIGNIFICANCE OF 'OTAKU' IN INNOVATION AND DIFFUSION OF POP CULTURE** **Morio, T** (Tsukuba University, Japan)

DAY TWO

SESSION 4: INDUSTRY ROUNDTABLE IN PLENARY

Facilitated by Prof Nicola Kleyn, Dean, Gordon Institute of Business Science (GIBS)

Input 1	Prof Justin Barnes, Executive Director: Toyota Wessels Institute for Manufacturing Studies
Input 2	Dr Katsumi Hirano, Executive Vice-President: IDE-JETRO
Input 3	Mr Iwasuke Shimada, Managing Director: Toshiba, Africa

SESSION 5B: Technical Plenary Session – Collaboration and Student Mobility

Chaired by Dr Aldo Stroebel, Executive Director: International Relations and Cooperation, National Research Foundation (NRF)

University presentations	University of Johannesburg -- Malefo, Lebethe (Mr)
	University of the Witwatersrand – Moolla, Mahomed (Dr)
	University of Pretoria -- Mokoduwe, Setsipane (Mr)
	Durban University of Technology – Davidson, Innocent Ewean (Prof)
	Oberlin University – Kanda, Nobuo (Mr)
	Doshisha University – Lizuka, Mari (Dr), Nakanishi, Hisae (Dr)
	International Christian University – Nishimura, Mikiko (Prof)
	Tokyo University of Marine Science and Technology – Izumi, Mitsuru (Prof)
	Tokyo University of Foreign Studies – Takeuchi, Shinichi (Prof)
	Tsukuba University – Morio, Takahiro (Prof)

SESSION 5B: TECHNICAL PLENARY SESSION

Chaired by Prof Bernard Ntambeleni, Vice-Chancellor, University of Venda (UNIVEN)

Modalities of Research Support for Collaboration, Student & Staff Mobility	
Japan Presenters	Mr Noriyoshi Masuko, Japan Society for the Promotion of Science (JSPS)
	Mr Tomohiro Seki, Japan International Corporation Agency (JICA)
	Dr Ryo Takagi, Japan Agency for Medical Research and Development (AMED)
	Mr Osamu Kobayashi, Japan Science and Technology Agency (JST)
South Africa Presenters	Dr Aldo Stroebel, National Research Foundation (NRF)
	Mr Daan du Toit, Department of Science and Technology (DST)
	Dr Whitfield Green, Department of Higher Education and Training (DHET)

SESSION 6: WRAP-UP SESSION; JOINT STATEMENT

Chaired by Prof Bernard Ntambeleni, Vice-Chancellor, University of Venda (UNIVEN)

Feedback from parallel sessions	
Health and wellness	Dr Lionel Green-Thompson, Sefako Makgatho University of Health Sciences
Security and social justice	Prof Takahiro Morio, Tsukuba University
Growth, exploration and conservation	Dr Thulani Makhalanyane, University of Pretoria
Presentation of Joint Statement & Closing Remarks	
Prof Ahmed Bawa, South Africa	Prof Takahiro Morio, Japan

APPENDIX TWO: POSTER SESSIONS IN THE RESEARCH COMMONS

Category: Education and Human Resource Development	Category: Governance and Social Justice	Category: Growth Exploration and Conservation
EMPOWERMENT OF TOWNSHIP STUDENTS IN SOUTH AFRICA THROUGH THE LEARNING IMPROVEMENT PROJECT **Kusakabe, T** (Hiroshima University, Japan) Mathabase, KC (University of Pretoria, South Africa)	**SDGS BOOMING IN JAPANESE BIG BUSINESSE S: CAN "SDGS" CHANGE THEIR STRATEGIES AND PERSPECTIVES?** **Lizuka, M** (Doshisha University, Graduate School of Business, Japan)	**MICROALGAE CULTIVATION USING WASTEWATER AT DEMONSTRATE SCALE FOR VARIOUS COMMERCIAL APPLICATIONS** **Renuka, N** Faiz Ahmad Ansari, FA, Rawat, I, Guldhe, I, Bux, F (Durban University of Technology, South Africa)
SUPPORT SERVICES FOR STUDENTS WITH DISABILITIES IN TECHNICAL AND VOCATION TRAINING COLLEGES IN SOUTH AFRICA **Makgopela, S** (Department of Higher Education and Training, South Africa)	**"DOING" THE 4.0 INDUSTRIAL REVOLUTION IN THE SOUTH AFRICAN WORKPLACE WHILE RECOGNISING THE SOCIO-POLITICAL AND ECONOMIC CHALLENGES OF THE PAST** **Moshime, K** Bazana, S (Rhodes University, South Africa)	**RESEARCH ON ENVIRONMENTAL CHEMISTRY: MEMBRANE TECHNOLOGY** **Takaba, H** Higuchi, H (Kogakuin University, Japan)
THE EXPERIENCES OF EARLY CAREER ACADEMICS AT THE UNIVERSITY OF VENDA (2014 -2018) **Mudimeli, LM** (University of Venda, South Africa)	**COOPERATION OR COMPETITION: REGIONAL ECONOMIC GOVERNANCE AND JAPAN** **Kabashima, H** (Yokohama National University, Japan)	**ASSESSMENT OF IMPACT OF CLIMATE CHANGE ON WATER SECURITY IN SOUTH AFRICA: A CASE STUDY IN A SEMI-ARID RIVER BASIN** **Woyessa, Y** (Central University of Technology, South Africa)
REVIEW ON THE STATE OF GIS APPLICATION IN SECONDARY SCHOOLS IN THE SOUTHERN AFRICAN REGION **Kapute Mzuza, MM** Van Der Westhuizen, C (North-West University, South Africa)	**POPULISM, PERSONAL VALUES AND PLANETARY GOVERNANCE** **De Wit, MP.** (Stellenbosch University, South Africa)	**UTILISING BIOMARKERS IN A MULTISPECIES APPROACH TO RELATE ORGANOCHLORINE EXPOSURE TO BIOLOGICAL EFFECTS: THE KRUGER NATIONAL PARK AND PHONGOLO FLOODPLAIN EXPERIENCE** **Wepener, V** Y Ikenaka Y, Gerber R, Yohannes Y, Ishizuka M, Smit NJ (North-West University, South Africa)

Category: Education and Human Resource Development	Category: Governance and Social Justice	Category: Growth Exploration and Conservation
LEARNER/STUDENT PERFORMANCE AS A REFLECTION OF LEADERSHIP ABILITY FOR TRANSFORMATION **Cishe, EN** Banda (née Rambwawasvika), S (Walter Sisulu University, South Africa)	**RECONSIDERING "INCLUSIVE GROWTH," AND GENDERED ECONOMIC SECURITY: TOWARD CONSTRUCTING COMPARATIVE RESEARCH AGENDAS** **Nakanishi, H** (Doshisha University, Japan)	**(MICRO)BIOLOGICAL HOT SPOTS IN THE SOUTHERN OCEAN** **Nunoura, T** (Japan Agency for Marine-Earth Science & Technology (JAMSTEC), Japan)
LEARNING AND INTELLIGENCE IN THE AGE OF AI **Yu, K** (University of Johannesburg, South Africa)	**INTERNATIONAL RELATIONS OF EVERYDAYNESS** **Shimizu, K** (Ryukoku University, Japan)	**Category: Economics & Business Science, Area studies** **ENHANCING THE GROWTH AND DEVELOPMENT IMPACT OF JAPANESE DIRECT INVESTMENT IN SOUTH AFRICA** **Nubong, GF** (North West University, South Africa)
LESSON STUDY IN INITIAL TEACHER EDUCATION: THE CASE OF THE UNIVERSITY OF PRETORIA, SOUTH AFRICA **Sekao, R.D.** (University of Pretoria, South Africa)	**CITIZEN PARTICIPATION, SOCIAL EXCLUSION, AND INSECURITY – AN EXAMINATION OF PARTICIPATORY SYSTEMS IN LOCAL GOVERNMENT IN SOUTH AFRICA** **Tapscott, C** (University of the Western Cape, South Africa)	**SOUTH AFRICAN INVESTMENT AND CONTRACT FARMING: THE CASE OF BEER INDUSTRY IN UGANDA** **Nishiura, A** (Soka University, Japan)
Category: Indigenous Knowledge Systems **APPLYING INDIGENOUS KNOWLEDGE SYSTEMS RELATED TO LOCAL INSECT RESOURCES FOR CONSERVATION EDUCATION IN SOUTH AFRICA AND JAPAN.** **Nonaka, K** (Rikkyo University, Japan) Dzerefos, C. M., De Sousa, L.O (North-West University, South Africa)	**ENERGY SECURITY AND CHALLENGES OF TRANSITION TO GREEN ECONOMY IN SOUTH AFRICA** **Saito, F** (Ryukoku University, Japan)	**DEVELOPING MANUFACTURING LEADERSHIP IN SOUTH AFRICA (AND REGIONALLY): THE ROLE OF MONOZUKURI** **Barnes, JR** (Toyota Wessels Institute for Manufacturing Studies, South Africa) (Gordon Institute of Business Science, South Africa)

Category: Education and Human Resource Development	Category: Governance and Social Justice	Category: Growth Exploration and Conservation
INDIGENOUS KNOWLEDGE INHERENT IN TRADITIONAL BEEKEEPING AS MINOR SUBSISTENCE IN TSUSHIMA ISLAND, JAPAN **Mizota, K** (Miyagi University of Education, Japan)	**YOUTH AND POLITICAL PARTICIPATION: IS ZIMBABWE'S DEMOCRACY GREYING?** **Masunda, O** (National University of Science and Technology, Japan)	**USING SATELLITE DATA TO ASSESS THE IMPACT OF AGRICULTURAL MINIMUM WAGES IN SOUTH AFRICA** **Ito, S** Piek, M, Von Fintel, DP (Institute of Developing Economies-Japan External Trade Organization, Japan)
TAPPING INTO THE VALUE OF EDIBLE INSECTS FOR EDUCATION AND ECOTOURISM **Palmer, M** Mkhize, B (North-West University, South Africa)	**RETHINKING SERVICE DELIVERY PROCESSES: THE ROLE OF MUNICIPAL SERVICES PARTNERSHIPS IN BASIC SERVICE DELIVERY - A CASE STUDY OF SEKHUKHUNE DISTRICT MUNICIPALITY** **Radingoana, K** (Stellenbosch University)	**CITRUS LIMON WASTE; MEDICINAL AND AGRICULTURAL ECONOMIC POTENTIALS** **Oyedeji, AO** et al (Department of Chemical and Physical Sciences, Faculty of natural Sciences, Walter Sisulu University, Mthatha, South Africa)
COMBINING THE CONSERVATION OF INTANGIBLE CULTURAL HERITAGE WITH PARTNERSHIPS AS A WAY INTO THE FUTURE AT THE INTERNATIONAL LIBRARY OF AFRICAN MUSIC (ILAM), RHODES UNIVERSITY **Watkins, L** (Rhodes University, South Africa)	**PROMOTING HUMAN SECURITY IN SOUTHERN AFRICA: REFLECTIONS ON THE COOPERATION BETWEEN THE UNIVERSITY OF THE FREE STATE AND OSAKA UNIVERSITY** **Solomon, H** University of the Free State	**WHAT DETERMINES THE STRICTNESS OF DOCUMENTATION REGULATION IN TRANSFER PRICING?** **Lee, H** et al (International University of Japan)
	TRANS-LOCAL LEARNING APPROACH TO DESIGN SOCIAL LEARNING FOR SUSTAINABILITY **Shogo, K** (The University of Tokyo, Graduate Program in Sustainability Science, Japan)	

POSTER SESSIONS		
HEALTH AND WELLNESS	**SECURITY AND SOCIAL JUSTICE**	**GROWTH EXPLORATION AND CONSERVATION**
TAPPING INTO TRADITIONAL TECHNIQUES TO EXCLUDE DEER AND WILD BOARS TO ENHANCE LOCAL EDUCATION AT ELEMENTARY SCHOOLS **Hashimoto, M** (Gifu University, Japan) Dzerefos, C (North-West University, South Africa) Nonaka, K (Rikkiyo University, Japan)	**BEING DISABLED IN THIS DAY AND AGE: ASSESSING ECONOMIC EMPOWERMENT OF JAPANESE AND SOUTH AFRICAN DISABLED CITIZENS** **Nzo, ZYZ** (Toyo University, Japan)	**HIGH SCHOOL STUDENTS AND HARVESTERS COLLABORATE IN THE CULTURAL PRACTICE OF VESPULA SPP. REARING AND UTILISATION IN JAPAN** **Nonaka, K** (Rikkyo University, Japan) Dzerefos, CM (North-West University, South Africa)
THE INFLUENCE OF TRADITIONAL HEALING PRACTICES ON ANTI-RETROVIRAL TREATMENT ADHERENCE IN VHEMBE DISTRICT, SOUTH AFRICA **Musvipwa, FM** Tshifhumulo, R, Matshidze, PE, Netshandama, VO (University of Venda, South Africa)	**SEPARATION OF WASTE SOLVENT CONTAINING ORGANIC SOLUTION FOR CO2 REDUCTION PROCESSES INVESTIGATED BY MOLECULAR MODELING** **Higuchi, H** Negishi, A, Hirosawa, F, Takaba, H (Kogakuin University, Japan)	**MULTIPLE USES OF TERMITES AND TERMITE MOUNDS IN SOUTHERN AFRICA AND SOUTHEAST ASIA** **Ono, E** (Komazawa University, Japan) Nonaka,K (Rikkyo University, Japan) Miyagawa, S (Gifu University) Takenaka, T (Nagoya University) Nzira, JJ (Ukuvuna Urban Farming Projects, South Africa)
ESTABLISHMENT OF AN EARLY WARNING SYSTEM FOR MALARIA IN SOUTHERN AFRICA, INCORPORATING CLIMATE PREDICTIONS – OVERVIEW OF THE IDEWS PROJECT **Minakawa, N et al** (Nagasaki University, Japan)	**INDIGENOUS WAYS OF KNOWING TO SUPPORT EDUCATION FOR SUSTAINABLE DEVELOPMENT: LESSONS FROM JAPAN** **Raath, S** (North-West University, South Africa) and Sakita, S (JSPS Research Fellow, Japan)	**SHOWCASING THE USE OF EDIBLE INSECTS FROM AFRICA AND JAPAN** **Sakamoto, N** (Itami City Museum of Insects, Japan) Dzerefos, C (North-West University) Nonaka, K (Rikkyo University, Japan)
THE JAPAN-AFRICA COLLABORATIVE RESEARCH ON HELICOBACTER PYLORI PROJECT **Yamaoka, Y** (Oita University, Japan)		

POSTER SESSIONS		
HEALTH AND WELLNESS	**SECURITY AND SOCIAL JUSTICE**	**GROWTH EXPLORATION AND CONSERVATION**
DEVELOPMENT OF SKILLS AND CAPABILITIES OF STUDENTS WITH DISABILITIES IN TECHNICAL VOCATIONAL EDUCATION AND TRAINING COLLEGES IN SOUTH AFRICA TO ACHIEVE THEIR SECURITY NEEDS BEYOND GRADUATION. **Makgopela, S** (Department of Higher Education and Training, South Africa)		

NOTES

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