

II.1 The 'Event' of Modern Sustainable Development and Universities in Africa

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Abstract

This paper considers the actualization of sustainable development in modern African universities. It draws on Deleuze's (1995) concept of 'event' to develop analytical lenses for considering different ways in which sustainable development is interpreted in African universities; the problems that sustainable development is responding to; and the ways in which sustainable development is actualized in events, networks, practices and experiences of universities. This analysis is based on a review of a wide range of over 200 documents, policy statements and emerging university practices. It also draws on a recent survey involving a number of universities in Africa.

The analysis is located within a wider understanding of the short, yet complex history of African universities, and knowledge that foundational concepts of sustainable development are not new to Africa. The paper argues that actualization of sustainable development in African universities must be contextualized within history; and within contemporary constraints and influences on practice.

The paper closes by drawing attention to the *problématique* of narrowly or technically interpreting sustainable development in African universities. Reminded by Ferguson (2006) that our academic concepts are often inadequate for the times, the paper asks whether sustainable development is an *adequate concept* or 'event' guiding education in Africa.

INTRODUCTION

There are different starting points for thinking about sustainable development (SD) in African societies.

Listen to things
More often than beings
Hear the voice of fire
Hear the voice of water
Listen to the wind to the sighs of the bush
This is the ancestors breathing

Birago Diop (1961, Senegal;
in Larson, 2005: 31)¹

Cosmological perspectives such as those reflected above show that interrelatedness of the natural and cultural order are not new to Africa. Foundational concepts of sustainable development are integral to

cultural practices in a diversity of African societies, and elsewhere. Shiva (2006, p. 1) for example refers to a concept of '*vasudhaiva kutumbkam*' [the earth family] in India. She states that 'indigenous cultures worldwide have understood and experienced life as a continuum between human and nonhuman species and between present, past, and future generations'. Numerous livelihood practices in Africa *demonstrate* SD, for example the *Machobane*, *Chitemene* and *Fundkile* Farming Systems in Lesotho and Zambia respectively; and traditional agro-forestry practices in Tanzania (Stromgaard, 1989; Tembo et al., 2008). Most often these days, however, we find standard global commentaries on SD in Africa that typically read as follows:

Global climate change reports indicate that Africa is highly vulnerable to the impacts of climate change ... Other threats to the natural environment include deforestation, over-exploitation of resources, deterioration

of marine and coastal ecosystems and water quality issues ... Problems of poverty, food insecurity, wars and violence, HIV/AIDS, environmentally related diseases, drought, water and sanitation are prevalent in the continent ... Within the world economy, Africa holds a marginal position. Most African countries do not meet the human development index ... and 19 countries with the lowest human development index are in sub-Saharan Africa ... The challenge for Africa is to overcome these threats to development and utilise and manage its rich natural resources sustainably for the well-being of its people today and tomorrow ... Africa needs to urgently increase human capacity and skills to improve development opportunities, and to respond and adapt to these risks. (extract from GUNi/IAU/AAU, 2011, p. 3)

This has implications for universities, which themselves have a complex history that is intertwined with modern development patterns. Popkewitz (2005, p. 23) notes that ‘Science is a central marker to differentiate what is modern and what is not ... In the 19th-century Europe and North America, scientific methods embodied what many intellectuals and social planners viewed as the most potent force shaping the world’. Scientific methods were exported, and became ‘indigenous foreigners’ that provide ‘cultural theses about modes of living’ (ibid., 2005, p. 31).² Before 1960 there were only a handful of universities on the African continent, all of them established in the colonial period following the ‘university college’ model (Africa Watch, 1991). These universities reproduced mainly the scientific and institutional patterns characteristic of British, French and Belgian universities and cultures³ (ibid.). Universities in Africa, while having a long and ancient history,⁴ are essentially a ‘post-independence’ phenomenon, established to service the independent nation state. Ironically, despite over 300 new universities and new forms of curriculum following independence; the history of science and the political economy of universities in Africa remain heavily shaped by the ‘indigenous foreigner’ phenomenon that Popkewitz (2005) alludes to.

Universities in Africa have also been affected by ‘turbulent times’, state control, economic decline, war and repression, and some loss of academic freedom. In particular, post-independent universities were hard hit by the impact of the global oil crisis in the 1970s and the subsequent recession and financial crisis in Africa. This influenced World Bank and International Monetary Fund (IMF) structural adjustment programmes, leading

to cuts in education, health and social services spending in the 1980s. Higher education (HE) was categorized as a *secondary priority* in education systems. Universities in Africa still suffer from this today, notwithstanding recent attempts to ‘revitalize’ African universities by the African Union and others. Today there are increased calls for strengthening academic freedom and redefining the role of HE in Africa in terms that are important to the continent’s realities. This involves promoting the public good; social transformation; democracy; human emancipation and giving greater attention to environmental issues (among others) (Africa Watch, 1991; Diouf and Mamdani, 1994; UNEP MESA, 2009; Singh, 2001; Zeleze and Olukoshi, 2004). However, all these objectives remain undermined by continued brain drain, financial difficulties, problems of purpose, conditions for scholarship, and epistemology in universities (Mamdani, 2011). They are also affected by high enrolment demands (enrolment numbers are increasing at rates of 10–14% annually, or doubling every 5–7 years) (Kellog and Hervey, 2010) and the broader, somewhat ‘dismal’ picture of the current status of HE in Africa. Enrolment rates for HE in sub-Saharan Africa are by far the lowest in the world. The region’s enrolment ratio is in the same range as that of other developing regions 40 years ago (Bloom, Canning and Chan, 2006). UNESCO (2009) states that ‘Despite the fact that the number of tertiary students in sub-Saharan Africa has dramatically increased since 1970, actual progress is muted by population growth. Over the same period, the “tertiary age group” population has grown by an average annual rate of 3%. Consequently, participation ratios (GER) only rose from 0.8% to 5.6% during this period [1970–2007]’, with persisting gender inequalities. Added to this scenario, Africa’s illiteracy rate of 176 million adults in sub-Saharan Africa (UNESCO, 2010) is a problem still staring the continent in the face.

Any reading of *SD actualization* in African universities must therefore be contextualized within history; and contemporary constraints and influences.

METHODOLOGICAL NOTE AND ANALYTICAL LENSES

Deleuze’s (1995, p. 141) life work on the ‘nature of events’ provides a useful way of understanding the emergence and actualization of SD in African universities. He states that the notion of the ‘event’ is ‘a philosophical concept, the only one capable of ousting the verb “to be” and its attributes’, providing a *critical process framework* for analysis. His work suggests a process of coming to understand ‘concepts invented’

(such as the concept of sustainable development), and their articulation in social practices (in this case the social practices of universities in Africa). Concepts (such as sustainable development), he argues, need to be assessed not for their truth or falsity, but for *the degree to which they are 'Interesting, Remarkable, or Important'* (p. 82, my emphasis). Patton (2006, p. 109) explains further, 'Concepts are interesting, remarkable or important when they give expression to new problems or solutions to problems already posed'. The notion of 'event' produces the following *questions and analytical lenses* useful to this study:

- **Analytical lens 1:** Is sustainable development, in its contemporary form, an 'interesting, remarkable or important' concept in and for universities in Africa? And if so, how is SD being viewed on the African university landscape?
- **Analytical lens 2:** 'If the concept is a solution, the conditions of the philosophical problem are to be found on the plane of immanence presupposed by the concept' (Deleuze and Guattari, 1994, pp. 80–1). This requires interrogation of the problem to which sustainable development offers a solution on the African continent, and what the conditions of this problem are.
- **Analytical lens 3:** *Events are actualized in states of affairs* (for example national or university level policies); *bodies* (for example structures in universities), *and in the lived experiences of people* (for example the experiences of professors and students in universities) (Deleuze and Guattari, 1994). This actualization is, in part, dependent on how the nature of the events is understood.
- **Analytical lens 4:** 'The event subsists in language, but happens to things' (Deleuze, 1990, p. 24). This indicates that incorporeal transformations occur that act upon the world and change social and institutional practices. Patton (2006) notes the need to differentiate between language and changed practices in these actualizations.⁵
- **Analytical lens 5:** Deleuze notes that it is important to differentiate between the problem-event (that is, why the event of sustainable development exists), and the possibility of other specifications and solutions (Deleuze, 1995, pp. 186, 203–4).

These analytical perspectives are used to focus the analysis of a wide range of over 200 documents, policy statements, and emerging university practices that were examined in and for the construction of this contribution to the Global Universities Network for Innovation (GUNI) publication on universities and sustainable development.⁶

SUSTAINABLE DEVELOPMENT AS AN 'INTERESTING CONCEPT' INFLUENCING PRACTICE IN UNIVERSITIES IN AFRICA (ANALYTICAL LENS 1)

Much has been written about the concept of SD, its origins and its contested contemporary appearances in policy discourses, appropriated privatization platforms and practices. Of significance to this paper is the widely recognized point that SD remains an *ambivalent concept*, best described by a South African environmental ethics scholar, Johan Hattingh (2002, p. 6) when he notes that:

the highly contestable nature of sustainable development can be ascribed to its highly ambivalent ideological dimensions: it can either function as an ideology, or as a critique of ideology (which in itself can be interpreted as an ideology, in so far as it serves the interests of those engaged in ideology critique).

This ambivalence is present in the **five perspectives on sustainable development** that appear most prominent in the African university landscape at this time in history (apparent causal influences are indicated in italics below). Different perspectives sometimes live 'side-by-side' in one university context (Togo, 2009), or one perspective may dominate in an institution.

1. **Interpreting SD in terms of social development:** The emphasis is on the more dominant society-economy nexus, leaving out the environmental relation, reflecting what some would refer to as 'weak' notions of SD (Hattingh, 2004). *This appears to be linked to an inadequate analysis of the relationship between environment–economy–society in poverty contexts; particularly a political ecology analysis of social development.*
2. **'Back-grounding' the concept of SD while foregrounding associated issues and risks such as climate change; water; land use and so on directly:** In such cases SD 'issues' or 'foci' tend to be dealt with in separate 'units' or disciplines, with little or no inter- or transdisciplinary engagement across issues or within complex issue contexts. *This appears to be linked to discipline or 'silo' thinking, and a lack of holistic engagement with complex issues. There also appears to be a strong link to global environmental research programmes.*
3. **Interpreting the concept of SD to mean 'community engaged university education':** Teaching and research is oriented towards local/national community-based and rural development problems, most

often associated with poverty, health, basic and adult education, environmental management, and food security. The focus is on making university education ‘more relevant’ in local context; and strategies such as fieldwork or service learning are typically used. *This appears to be linked to moral concerns with well-being and the role of the university in society.*

4. **Interpreting the concept of SD to mean participation in new science and technology trajectories:** These are most often oriented towards eco-efficiency, low carbon development, green economy, sustainability technology innovations and associated new market opportunities; and tend to reflect discourses of the ‘knowledge economy’. This trend is heavily science and technology based. *This appears to be linked to technology transfer imperatives; ecological modernization and associated technology-centred developments. It is also most closely linked to new forms of global capital flow.*
5. **Critiquing SD discourse using political ecology arguments:** These critiques tend to reject global discourses of SD; particularly where evidence of neo-liberal appropriations of SD exist. Mainstream SD is viewed with suspicion. Other preferred discourses such as political ecology; environmental racism; social justice, and ecological economics are used to engage issues often associated with SD. *These arguments are premised on socially critical and social justice analyses focusing mainly on control of resource flows, and patterns of inclusion and exclusion. This work also deals critically with the manner in which certain appropriations of SD form part of a wider ongoing process of ‘structuring under-development’ on the African continent (Bond, 2006; Ferguson, 2006).*

From this, SD is potentially an ‘interesting concept’; particularly if one begins to consider *how and why* different conceptions of SD are becoming visible; what *tensions and contradictions* exist between these the conceptions of SD and why this might be so. To understand these perspectives more fully, however, it is necessary to probe the ‘problem’ to which SD is responding.

TO WHAT PROBLEM IS THE CONCEPT OF SD RESPONDING? (ANALYTICAL LENS 2)

Diversity of perspective and problem conception is not surprising given the immense diversity and scope of the African continent and its complex histories. As Ferguson (2006, p. 1) so eloquently states:

Africa is a huge continent, covering one fifth of the world’s land surface, where over 800 million people live an extraordinary variety of lives. Is there any meaningful sense in which we can speak of this [that is, Africa] as ‘a place’? Looking at the range of empirical differences internal to the continent – different natural environments, historical experiences, religious traditions, forms of government, languages, livelihoods, and so on – the unity of a thing called ‘Africa,’ its status as a single ‘place’, however the continental descriptor may be qualified geographically or racially (‘Sub-Saharan’, ‘black’, ‘tropical’, or what have you) seems dubious ... Indeed, it has often been suggested that the very category of ‘Sub-Saharan Africa’ with its conventional separation from a ‘Middle East’ that would include North Africa, is as much a product of modern race thinking as it is an obvious cultural or historical unity.

From this vantage point – of immense diversity – and historically constituted identity configurations that today hold purchase both internally on, and externally to the African continent, Ferguson goes on to state that most often:

When we hear about ‘Africa’ today, it is usually in urgent and troubled tones. It is never just Africa, but always the crisis in Africa, the problems of Africa, the failure of Africa, the moral challenge of Africa to ‘the international community’, even Africa as a ‘scar on the conscience of the world’ (Ferguson, citing the former British Prime Minister Tony Blair’s phrase, 2006, p. 2).

Thus it is most often that SD is reported on, and mobilized within a framework of securing improved life chances and increased well-being via a strategy that first describes the ‘problems’ that SD is interconnected with – as noted in the introduction to this paper. There are many of these and they include:

- Poverty
- HIV/AIDS
- Loss of ecosystem services
- Deforestation
- Inadequate educational provisioning and quality
- War and famine, and so on

A wide array of United Nations (UN) programmes and reports (for example the UNDP Human Development Reports; the UN Millennium Development Goals reports and so on), define SD on the African continent in terms that most often focus on poverty; governance; agricultural modernization; health; education and envi-

ronmental management. These reports tend to focus on identifying the ‘lacks’ and the ‘problems’ that need to be understood and responded to by various means. Such knowledge is produced through a particular form of science oriented towards monitoring the status quo, and providing policy-relevant resources, scenarios and guidelines. Peet and Watts (2004) however, are critical of this kind of policy-relevant research, and argue that it enrolls the university in what they describe as an AIM (academic-industry-media) complex; which serves simply to promote continuities of the status quo. Achile Mbembe (2002) states that the types of analyses that focus on the ‘lacks’ and the ‘problems’ tend to focus on what Africa is not, and not on what Africa is. With such an argument at hand, it would be interesting to see equivalent research investment and emphasis on those sustainability practices that do exist in Africa (as briefly noted in the opening of this paper). This raises a question on how ‘the problems’ that SD may need to respond to are defined.

Ferguson (2006) describes ‘the problem’ in terms of transnational forms of power and globalization in a context where states (due to IMF policies that focused on ‘rolling back the state’) are ‘in significant ways, no longer able to exercise the range of powers we usually associate with a sovereign nation state’ (p. 93). He describes the emergence of new forms of governmentality (of which sustainable development may be one) emerging under the influences of globalization that ‘bypass states altogether’ (p. 100). Transnational topographies of power are establishing themselves in ways that ‘hop’ over whole sections of society, developing only those parts of the continent that are valuable for various reasons, a process that creates and sustains forms of structured underdevelopment. Transnational mining interests and conservation/sustainable development programmes alike tend to create enclaves of power and control that fail to benefit the larger society, or even the nation states where the natural resource or mineral wealth lies. This transnational topography of power makes (sustainable) development of any kind exceedingly difficult. Consequently Ferguson argues for ‘a heightened level of reflexive scrutiny of our categories of analysis’ (2006, p. 89). Bond and Hallows (2002) argue further that mainstream SD is an inadequate response to Africa’s problems. They propose clear and explicit normative commitments to sufficiency, redistribution, equality and ‘real’ sustainability in development thinking. These complexities in problem definition provide the ‘backdrop’ to the emergent social practices of SD actualization in African universities.

HOW IS THE EVENT OF ‘SUSTAINABLE DEVELOPMENT’ ACTUALIZED IN AFRICAN UNIVERSITIES? (ANALYTICAL LENS 3)

While numerous examples of the actualization of sustainable development exist in African universities’ social practices, there is little consolidated data on the exact nature of this actualization. Best available evidence (from over 200 documents), and data produced from a recent survey conducted by the Global Universities Network for Innovation (GUNi); the International Association of Universities (IAU), and the Association of African Universities (AAU) targeting 500 higher education institutions (HEIs) on the African continent shows that among the 73 universities that responded (14.6%); there is actualization of SD discourse in this percentage of universities. It states that:

Results of the study show that higher education institutions in Africa are promoting sustainable development both on their campuses and in their communities. Commitment to sustainability is reflected in some of the universities’ written statements. Some have integrated sustainability in their curricula; some are involved in sustainability research and outreach projects. African universities are also involved in sustainability partnerships at various levels and some are setting aside funds for sustainability projects. Involvement in sustainable development initiatives is however still significantly small in most universities. (GUNi/IAU/AAU, 2011, p. x)

As mentioned above, Deleuze (1995) notes that ‘events’ are actualized in *states of affairs*; in *bodies, structures and artefacts*; and in the *life experiences of people*. Actualization trends visible in the data⁷ include:

1 ACTUALIZATION IN ‘STATES OF AFFAIRS’: NEW PARTNERSHIPS FOR SD IN HIGHER EDUCATION

The formation of new partnerships is a significant ‘actualization’ process that influences other SD-oriented social practices in universities. These new partnerships operate at different scales, with some being international; and others being national and/or local. Some examples include:

- The Columbia University Earth Institute and the MacArthur Foundation established a partnership with universities in Africa and in other developing countries to develop and offer a Global Master’s Degree in Development Practice (<http://globalmdp.org>). This is an interdisciplinary graduate degree programme, which prepares students to better iden-

tify and address the challenges of SD. The initial partnership was influential in charting out ‘sustainable development competences’ that are seen to be relevant to the African continent and other developing country contexts.

- The Mainstreaming Environment and Sustainability in African Universities Partnership (MESA) (www.unep.org/training) links the United Nations Environment Programme (UNEP) with key universities and partners that are actively engaged with environment and sustainability related social practices in universities. Partners include the AAU and UNESCO (among others). This network provides professional development support to academics to bring about curriculum innovations or SD social practices in their universities (UNEP, 2008).
- The United Nations University (UNU) linked Regional Centres of Expertise (RCE) Network on Education for Sustainable Development links universities with local community partners, but also with a continental and global RCE network. The focus of the RCEs is to strengthen transformative learning praxis in regional contexts. [www.ias.unu.edu/efsd/rce]
- The UNESCO-led Education for Sustainable Development (ESD) Teacher Education network (called AFRITEIS) links teacher education programmes to the UNESCO International ESD Teacher Education network; UNESCO’s Education for All and other schools programmes, as well as to subregional networks, such as the Southern African Development Community (SADC) ESD Teacher Education network and wider Teacher Education networks such as the Teacher Training in sub-Saharan Africa (TTSSA) network [www.unesco.org/desd]

The examples show the ‘mobilization power’ of international organizations to bring a range of diverse actors together in SD actualization networks. Partnerships are, however, also a significant feature of ESD work *at university level*. The GUNi/IAU/AAU (2011) survey showed that over 60% of the responding institutions have established some form of partnerships. The partners include other universities and institutes, governmental agencies, national governments, international associations, research centres, corporations, foundations, and so on. They are either from other African nations or from outside the continent, especially Europe.

ESTABLISHMENT OF NEW/SPECIFIC INITIATIVES AND PROGRAMMES

Partnership formations tend to focus on the establish-

ment of new/specific initiatives such as development of new master’s degrees; establishment of new local networks and/or professional development of academics. These all strengthen the capacity of universities to develop their ESD social practices; and to provide local and/or regional networked links. There are numerous such initiatives that are visible on the African universities’ landscape, and again these can be international or national. For example:

- Sweden (SIDA) runs International Training Programmes on ESD in Higher Education; and Germany (GIZ) are developing International Training Programmes on ESD for Teacher Educators (there are many other similar international training programmes on offer for academics from African universities in all kinds of ‘priority areas’ related to SD)
- The African Caribbean Pacific (ACP)/European Union (EU) development programme formed a partnership with the African Union (AU), establishing specific ‘research platforms and programmes’ to strengthen SD research in universities. These link universities with each other (through mobility grants), and with the AU agenda for capacity building. Many other such examples exist.

In the GUNi/IAU/AAU (2011) survey sample, a total of 111 projects were listed by respondents as products of SD-oriented partnerships. These include education programmes; capability projects to develop leadership in SD; staff and student exchange; research projects; improvement of institutional facilities; library capacity building; resources management; waste management; strategies to support communities on topics of gender, peace, health and early childhood; issues of climate change; renewable energy projects; and cultural promotion, among others.

RESEARCH AND NEW KNOWLEDGE GENERATION

Another significant actualization process is research and new knowledge generation. For example, the Southern African Regional Universities Association (SARUA) recently commissioned a team of researchers to present papers on the ‘status’ of climate change and development knowledge in southern Africa, with the explicit purpose of influencing HE research and development capacity to respond to climate change in the region. This meeting led to an action plan for universities (SARUA, 2011).

There appear to be *more regional/subregional and international–African* partnership initiatives influencing SD research than locally constituted directions for SD research. This may be attributed to the funding situation for research in Africa. Examples here are research

networks funded by the International Development Research Centre (IDRC) into eco-health development in West Africa; by the UK Department for International Development (DIFD) into ecosystem services and development; Deutschen Gesellschaft für Internationale Zusammenarbeit (GIZ) and EU-funded SD science and technology research; Sino–Africa research partnerships on water technologies and so on (there are many other examples). An example of a *national* level research plan guiding SD research is South Africa’s Department of Science and Technology’s (RSA, 2010) ten-year national research plan focusing on global change and energy research with associated national funding, but international partnerships form a core of this research plan.

The GUNi/IAU/AAU (2011) survey and the MESA review (UNEP, 2008) showed that *universities themselves were investing in SD research*, which indicates that research funding is not only coming from development partners, but also internally from national governments. This leads to mainly smaller scale research projects (funded locally with smaller scale funds) focused mainly on campus or in local community contexts. An example would be the Southern African Development Community (SADC) ESD Research Network support for small-scale case studies involving seed funds of \$500 per local project (SADC REEP, 2011). The power and potential of the ‘small scale research project’ therefore remains poorly understood in/as sustainable development research on the African continent, as does its relevance to teaching and/or community engagement.

The GUNi/IAU/AAU (2011) survey indicated that student research projects tended to remain largely unpublished, and most publishing from African universities is ‘co-authored’ by international research partners. A substantive body of knowledge on SD in Africa may therefore be ‘hidden’ in student research outputs (theses) and in individual, small-scale research conducted by academics at a local level, reported in ‘grey literature’ and other forms of research reporting, and not in international ISI accredited journals.

Sustainable development research trends need to be read against the wider picture of research (or lack thereof) in African universities more widely. The recent ‘Global Research Report: Africa’ shows for example that Africa has extremely uneven distribution of research and innovative capacity (Adams, King and Hook, 2010). Research is concentrated in Egypt in the north, Nigeria in the west, and South Africa in the south. Africa produces only some 27,000 ISI accredited papers a year – about the same volume of published

output as the Netherlands. As stated by Adams et al. (2010, p.1):

A problem for Africa as a whole, as it has been for China and India, is the haemorrhage of talent. Many of its best students take their higher degrees at universities in Europe, Asia and North America. Too few return. The African diaspora provides powerful intellectual input to the research achievements of other countries but returns less benefit to the countries of birth. That is at least in part because of a chronic lack of investment in facilities for research and teaching, a deficit that must be remedied.

Participation in large-scale international research programmes is monopolized by larger universities with stronger international research profiles and capability; institutions that also dominate the formal academic publishing arena. There is a strong ‘country bias’ to research outputs. Formally accredited research outputs from the African continent also have a ‘subject bias’, with most research being linked to natural resources and their management and use. The Adams et al. (2010) report also correlates research output with GDP, indicating the important relationship that exists between research and development; which has implications for sustainable development of the continent. They state:

The leading countries by [research] output are South Africa, Egypt, Nigeria, Tunisia, Algeria and Kenya. Four of these are also leading countries in terms of GDP (South Africa, Egypt, Nigeria and Algeria) while Kenya and Tunisia fall in the second GDP tier. (Adams et al., 2010, p. 5)

An important question may be how Africa’s relative advantage in natural resources research can be mobilized for sustainable development of the continent; and also how the benefits of research can be strategically considered within development planning? This is particularly significant in the light of Kellogg and Hervey’s (2010, pg. 8) comment that ‘Research in Africa has been a highly productive investment’. They (citing Alston et al., 2000) report that ‘In one study by the International Food Policy Research Institute, it was found that the annual median returns from agricultural research were 34.3% for 188 R&D projects in Africa. The returns from 1800 agricultural research projects throughout the world were 44.3%.’ They thus lament the fact that research investments in many African nations are stagnant or declining.

2 ACTUALIZATION IN 'BODIES, STRUCTURES AND ARTEFACTS'

Sustainable development actualization also occurs through existing bodies, structures and artefacts, and manifests in (new) bodies, structures and artefacts. This occurs at university level; at national and/or subregional levels; and at international level.

NEW AND/OR CHANGED UNIVERSITY ASSOCIATIONS AND SUBREGIONAL STRUCTURES

Little evidence was found of new university associations and/or subregional structures focusing directly on SD and African universities, beyond the networked partnership structures mentioned above. However, established university structures, such as the AAU; SARUA; UNESCO's Teacher Education Programme; and the Association for the Development of Education in Africa (ADEA) have engaged substantively with issues of SD on the African continent. They appear to be taking a leadership role in supporting African universities to give attention to issues associated with SD. For example, the Association of African Universities (involving a membership of some 225 universities) hosted its 12th Annual General Conference under the theme: 'Sustainable Development and Universities in Africa' (AAU, 2009). The AAU has actively supported the Mainstreaming of Environment and Sustainability in African Universities Programme Partnership. It also organized African Universities Day on the theme of Sustainable Development, and, as mentioned above, it has partnered with the IAU and GUNi to conduct a continent-wide survey on universities and SD. The ADEA are organizing a continental conference on Education and Sustainable Development in 2012 [www.adeanet.org]. Other examples of this kind of institutional leadership exist at subregional level (for example where SARUA are taking leadership in defining a climate change and development agenda for university development).

NEW POLICIES AND STRATEGIES

Another area where SD actualization occurs is at the level of policy and/or strategy development. Few/no examples of specific *national level university policy* on SD were found in the documents reviewed for this study. However, *indirect policy influences*, such as national commitment to Millennium Development Goals; poverty reduction strategies; national SD strategies; national environmental and/or social development policies and so on were found to be substantive influences on university research, teaching and community engagement practices. A typical example here would

be the manner in which national environmental policy influences both teaching and research in environmental science departments; or the manner in which poverty reduction strategy priorities influence spending on education and training; as well as definition of national priorities. A further important finding is that there is an increasing trend towards defining SD policy statements or strategies (or associated policy statements and strategies) *at university level*. The GUNi/IAU/AAU (2011, p. 25) survey found for example, that: 'Among the responding institutions, 46.6% have stand-alone sustainable development strategies while 28% do not. The rest either did not respond or the respondents did not know if their institutions had such strategies.' The study also revealed that 'more stand-alone sustainable development strategies were available in smaller HEIs (with enrolment of up to 10,000) compared to the bigger ones. This finding negates the assumption ... that the bigger the institution the more likely it will pursue sustainable development practices.'

The most widely practised approach to SD policy and strategy in universities seems to be the inclusion of 'sustainable development' in vision and mission statements, a good example here being the Vision and Mission Statement of Makerere University in Uganda (one of Africa's older universities) which states that the university seeks 'To be a centre of academic excellence, providing world-class teaching, research and service relevant to the sustainable development needs of society' (UNEP, 2006).

Some institutions were also beginning to define specific *Education for Sustainable Development Strategies*. This is different to including a statement on sustainable development in a vision and mission statement; or having a university SD policy that addresses integrated SD issues in the university and/or community. ESD strategies tend to be more oriented towards *changes in teaching, learning and research*. A good example is the ESD strategy of Jomo Kenyatta University in Kenya. It was noticeable that in countries with national ESD strategies (Lesotho, Swaziland, Kenya),⁸ universities seemed to be more focused on the ESD practices as outlined above.

NEW STRUCTURES EMERGING AT UNIVERSITY LEVEL AND AT INTRA-UNIVERSITY LEVEL

The GUNi/IAU/AAU (2011, p. 27) survey reveals a diversity of new structures emerging at university and intra-university level. Of the 61 responses to the survey, it was found that:

Most institutions have an institutional research

agenda on sustainable development (60%). In descending order, this was followed by socially and environmentally responsible investment practices and policies (42.6%); Sustainable Development Coordinator (39.3%); Dean of Environmental Programmes or Director of Sustainability Programmes (39.3%); Environmental Council/Sustainable Development Task Force (37.7%); and orientation programmes on sustainability for faculty and staff (36%).

One of the most wide spread ‘new’ structures dealing with SD issues in universities are *Environmental Science Departments*, most often located in Science Faculties (although other configurations were also noted). There are, as yet, few departments titled ‘Sustainable Development’ – in fact no evidence of such a department was found. Most major universities in Africa today have Environmental Science departments or programmes. These have been variously supported by international donor organizations, or by national governments and universities themselves. This has led to an associated range of qualifications being offered in Environmental Sciences or Environmental Management related areas, which previously (around 20–30 years ago) did not exist in African universities (see below). Many of these programmes are including issues of sustainable development.

There are also specially dedicated *centres or institutes* that are established to deal with SD issues and risks. Most often these are closely associated with the environmental or water sciences, environmental health issues, sustainable agriculture, gender studies and increasingly with climate change. An example here is the Institute of Ecology and Environmental Studies, Obafemi Awolowo University, Ile-Ife, Nigeria. There are a few centres forming around the concept of sustainable development *per se*, although these are not widespread across the continent. Probably the most active and established of these would be the Sustainability Institute at the University of Stellenbosch in South Africa [www.sustainabilityinstitute.net]. Interesting too are the establishment of sustainable development ‘sites’ associated with university programmes, such as the Millennium Villages that are linked to the Global Masters Degree in Development Practice (<http://globalmdp.org>). These provide ‘real-life’ laboratories for SD practice, learning and research.

The GUNi/IAU/AAU (2011) survey also reports that interdisciplinarity is important in ESD as it enables a shift from scientific specialization to dialogue between the disciplines. From the survey, 44 institutions (60.3%) responded positively to having multi-

and interdisciplinary structures for research, education and policy development on sustainability issues.

NEW ARTEFACTS (CURRICULA, LEARNING MATERIALS, BUILDINGS)

There were very few examples of newly developed dedicated buildings for SD (although the University of Stellenbosch, South Africa has a dedicated Sustainability Institute; and Rhodes University, South Africa has a dedicated Sustainability Commons and Environmental Learning Research Centre, built with sustainability principles). This section will therefore focus more on curriculum as visible artefact of SD actualization. While it was not possible to undertake content analysis of all courses offered in all African countries, content analysis of all study material in one country context – South Africa – showed that environment and SD issues were being integrated into *most disciplines and programmes* in the country’s 23 universities, although the levels of integration were uneven. The integration of SD content into programmes seems to be a ‘bottom up’ affair, with lecturers and professors driving the content changes; influenced primarily by international issues, links and networks, and national policies.

The GUNi/IAU/AAU (2011, p. 36) survey reflects this trend; and responses from the 69 institutions show that SD issues are woven into all the traditional disciplines; with greater emphasis in the social sciences; natural sciences and engineering disciplines (see Figure II.1.1). This same trend has been noted in smaller scale studies at university level (Togo, 2009), and even within single departments (Greyling, 2011). A key finding from these studies is that commerce and management disciplines and faculties appear to be *least engaged* with SD issues (*ibid.*). This is a cause for concern, given the need to engage the *nexus of economy–ecology–society* in SD thinking.

It would also seem that *integration into existing disciplines* is the primary manner in which SD is being actualized in curricula in African universities. The GUNi/IAU/AAU (2011, pp. 36–7) survey reports that ‘Only 26% (out of 68 institutions which responded) offer specific sustainable development degree programmes; 72% do not’. Interdisciplinary teaching is also not widely practised, and the GUNi/IAU/AAU (2011, p. 38) study found that ‘more than half of the institutions forming part of this study do not offer interdisciplinary courses on sustainable development. Considering the different types of institutions, such courses were mostly offered by public rather than private institutions. None of the private for-profit institutions had interdisciplinary courses on sustain-

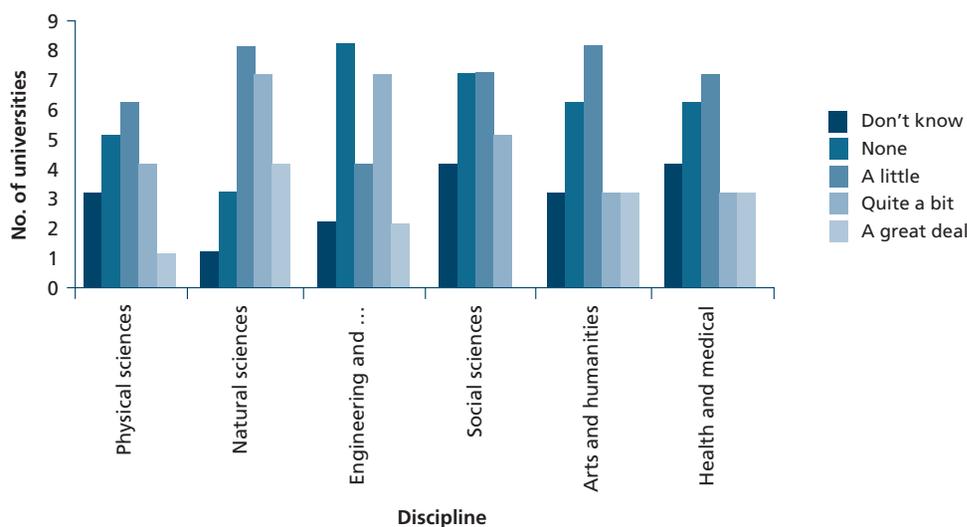


FIGURE II.1.1 The extent to which sustainability is woven into traditional education disciplines
 Source: IAU/AAU/GUNI 2011, p. 36.

able development'. Where these courses were being offered, 'about 58% of the interdisciplinary courses on sustainability offered by the institutions were offered as compulsory courses' (ibid.).

The GUNi/IAU/AAU (2011) survey, and the MESA review (UNEP, 2008), showed that a number of factors can positively or negatively influence the introduction of new courses in SD. Positive factors are: implementation of national policy directions; new institutional policy development; new faculty leadership; new staff member; and introduction of reward system. Barriers hindering the introduction of SD-oriented courses are: lack of finance; lack of human resources or specialized staff; lack of awareness and information about SD; and inadequate leadership and/or structures. This makes professional development of staff and leadership development (that is, actualization through the experience of persons) an important factor.

There was also evidence of an *interest in mainstreaming* of environment and sustainability in African universities, particularly among those universities that have been participating in the MESA programme. Research conducted within the SADC Regional Environmental Education Programme context (where a MESA network has been operating for seven years); and the MESA first phase review both show that there are several factors influencing *mainstreaming*; most notably *capacity for whole institution mobilization*. The establishment of three 'MESA Chairs' in SADC with the specific mandate of mainstreaming

is proving to be a successful strategy to support mainstreaming of environment and sustainability. The University of Swaziland, which has one of the MESA Chairs, has a MESA Strategy, and a cross-faculty MESA implementation committee supported by the Vice Chancellor and university management, it has undertaken a university-wide MESA audit, and is planning cross-university interventions including student involvement, curriculum innovation, research development, and capacity development of staff (UNISWA, 2011). The MESA programme is showing that individual innovation, and establishment of communities of practice are also important strategies for mainstreaming, as are university-wide sustainability assessments. For this reason a Unit-based Sustainability Assessment (USAT) Tool was developed for MESA (Togo and Lotz-Sisitka, 2009; see www.unep.org/training), which is being used by an increasing number of universities, departments and/or faculties (although the practice is not widespread, nor is it a 'top down' initiative). The GUNi/IAU/AAU (2011, p. 61) survey shows further that mainstreaming is only taking place 'a little' (42 cases in total in the survey); and there are very few cases of a 'great deal' of mainstreaming. While this is the case, this information does not show a lack of awareness of the *need for mainstreaming*, and there is wide spread evidence that universities in Africa are either slowly beginning to engage with such processes, or are aware of what needs to be done. Universities were aware of what courses were needed to increase mainstreaming, and

respondents noted the important role of policy and university leadership in mainstreaming (GUNI/IAU/AAU, 2011; UNEP, 2008).

NEW MANAGEMENT PRACTICES

The GUNI/IAU/AAU (2011, pp. 35–6) survey shows new management practices as another area of SD actualization in African universities. Even though institutional commitment to specific sustainability practices was rated to be low (see Figure II.1.2), institutions had plans to pursue some of these practices in future. In descending order, frequently identified practices for future action include energy conservation initiatives (identified in 54 institutions); developing new strategic plans with a strong sustainability component (48 institutions); developing compulsory courses in sustainability (32 institutions); and developing sustainable food programmes (20 institutions). In management operations, universities in Africa were found to be promoting initiatives like green building design, energy conservation, waste reduction, water conservation and sustainable landscaping among others. Promotion of these initiatives is however still very low, which might seem to suggest that physical operations are not a major focus for SD actualization in African universities. This can also be understood in the light of resource constraints. There is, however, an emerging relationship between scholarship focusing on these practices and the introduction and/or improvement of new management practices. Examples here include the Kigali Institute

of Science and Technology in Rwanda and Jomo Kenyatta University in Kenya which have, through their research, introduced biogas plants as innovations on their campuses, and these are also used as teaching resources. The Engineering Department at the University of Mauritius investigated ‘green campus’ technologies (UNEP, 2008), and through this, were able to reduce paper wastage. It would seem that sustainable campus management could be both a productive area of research and teaching, and a way of modelling and developing new practices.

3 ACTUALIZATION THROUGH THE LIVED EXPERIENCES OF PEOPLE

PROFESSIONAL INTEREST AND DEVELOPMENT OF UNIVERSITY STAFF

Theories of social change reveal that very little change can take place without the active engagement of people; that is, through the expression of individual and collective forms of agency (Archer, 2000). The actualization of SD in universities takes place through the agentive acts of university managers, teachers, researchers, students, administrative and support staff, and university community interactions. The significance of professional development of academic staff and university leaders emerged as one of the key elements that are enabling the actualization of SD (in all of the forms outlined above) in universities. This included participation in networks, professional development programmes, SD seminars and conferences, and in community of practice activities. Significant

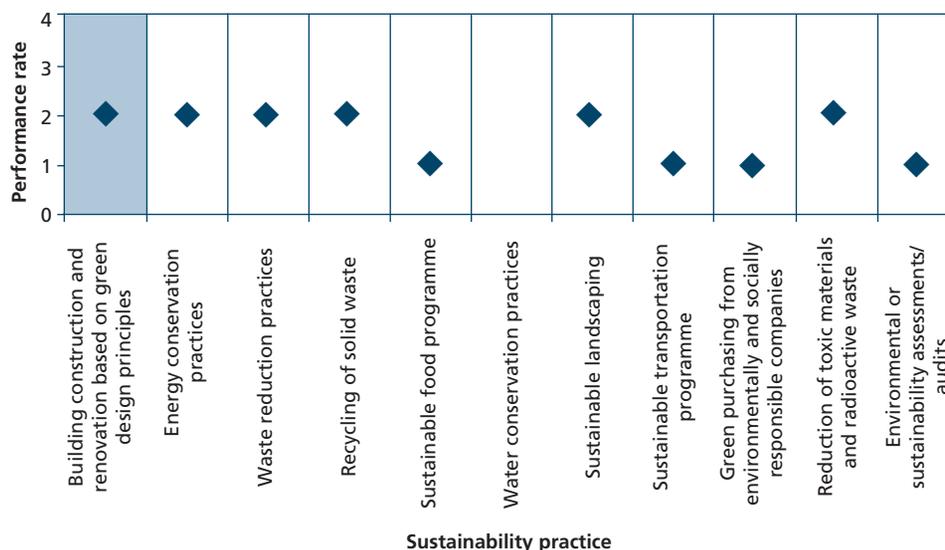


FIGURE II.1.2 Institutional commitment to specific sustainable development practices
Source: GUNI/IAU/AAU 2011, p. 35.

in the MESA programme review (UNEP, 2008) was substantive evidence of professional interest in sustainability issues among university staff participating in the MESA activities. In many cases, it is the professional interest and motivation of university staff members that was the *key driver* of SD innovation in universities, particularly where the SD interest was oriented towards community engagement, poverty reduction, environmental management and development. Other incentives, such as abilities to participate in international networks, and publishing opportunities were also revealed as being important to the development of interest and motivation among professionals in universities (Lotz-Sisitka and Lupele, 2006). The MESA review cites examples of the significance of professional development opportunities as follows:

‘This (MESA Universities Partnership) has provided a broader context for our work and has opened up opportunities for collaboration more widely in Africa. This is **essential** if we are to find African solutions to Africa’s environment and development challenges, especially new risks associated with climate change.’ (MESA Professor, 2004, cited in UNEP 2008)

‘I very much appreciate the opportunity given to me to participate in this MESA e-learning course and in the e-learning process. I think I would now find my way to register for it to learn it properly. It is a big way of learning how to develop our course content to address sustainable development issues in Africa ... It is not only useful, but **needed** in my institution and in all African universities.’ (MESA Professor, 2007, cited in UNEP, 2008)

Appropriate professional development opportunities are important for building internal capacity for actualizing SD (in any of its forms) in universities. The GUNi/IAU/AAU (2011, p. 62) survey indicated that while this is the case, few institutions were providing substantive opportunities for staff development in sustainability issues (only 49% of 65 responding institutions). This was also found to be the case in university wide studies (Togo, 2009); and at individual departmental level (Greyling, 2011).

STUDENT MOBILIZATION

The GUNi/IAU/AAU (2011, p. 62) survey revealed that ‘involvement of student groups in sustainability was low, but universities had other ways of getting students engaged in sustainable development initiatives. Field work was the most common among universities with others being career counselling,

job fairs, role modelling etc.’ Within the MESA network there are some examples of student groups getting involved in SD issues on campuses. For example, at Strathmore University in Kenya, and at Cairo University in Egypt, students are working with professors in a youth leadership programme; while at the University of Swaziland, the University’s student-led ‘Green Team’ are actively engaging the student body in a range of sustainability initiatives. UNEP has also hosted a students’ programme under the MESA initiative named the ‘Sustainability Generation’, and student organizations attending the MESA Conference in Nairobi in 2009 produced a ‘Student Action Plan’ which identifies three main action plans including ‘theoretic learning’, ‘experiential learning’, and ‘sustainability leadership’ (UNEP MESA, 2009). In South Africa student organizations are working together to host a ‘Blue Buck Summit’ (the Blue Buck was the first mammal to become extinct on the African continent) for student environmental organizations in preparation for the climate change negotiations at COP17.

NEW PEDAGOGICAL PRACTICES AND LECTURER–STUDENT RELATIONS

Another area of actualization lies in the creation of new pedagogical practices leading to new lecturer–student relations. Use of pedagogical strategies such as fieldwork, service learning and action research are noted as being popular among lecturers involved in SD issues. Students are therefore engaged in a wider range of experiential learning interactions. These are valued by students. As stated in the MESA Student Action Plan (UNEP MESA, 2009), there is a need to link sustainability field visits to credits, and to engage students in ‘sustainability weeks’ on campus that involve both symbolic and literal activities. Such practices among students appear to be on the rise in universities, and a number of case examples of student engagement in environment and sustainability issues were found on campuses (although these remain under-developed, and under-documented). Students were also interested in sustainability internships and volunteerism opportunities. Student mobilization remains a key area for increasing participation in SD actualization in Africa universities.

NEW UNIVERSITY–COMMUNITY RELATIONS

A further area of actualization at experiential level lies in the establishment of new university–community relations. There is firm evidence that universities in Africa are using SD as a key focus area for engaging

in new forms of university–community relations. The GUNi/IAU/AAU (2011, pp. 51–4) survey showed that 41 out of 61 respondents (67.2%) stated that they were engaged in *rural development*. Among the 41, this involvement was in form of research (63.4%), staff and student outreach activities (48.8%) and internship (43.9%). Out of 61 respondents, 52.5% of institutions were engaged in *peace, security, conflict resolution/prevention training*. A total of 57 institutions responded to the question on promotion of *cultural diversity*. Of these, more than half (59.6%) indicated that they do promote cultural diversity, intercultural dialogue and understanding. More than 80% (out of 58 institutions) indicated that they are involved in *the prevention of HIV/AIDS*. The most common forms of initiatives that institutions were taking in engaging with HIV/AIDS prevention include staff/student outreach activities (32.5%), direct collaboration (27.7%) and research (22.9%). Fifty-five per cent (55%) of the 73 respondents indicated that they had some form of non-formal and informal SD programmes that they were involved in. High levels of participation in these kinds of issues are more significant when only half of the responding institutions did not receive support for SD projects or activities. This indicates that SD appears to be an important ‘site’ or focus for *new forms of voluntarism and/or community engagement*. Of significance too, was the finding from the document review that these kinds of activities often lead to *real, tangible benefits to communities at grassroots level*. Some good examples illustrate this point:

- The Kigali Institute of Science and Technology developed a research programme on biogas technology: 11 biogas plants were installed in prisons and 10 in schools, and to date 1500 domestic biogas plants have been installed in households of different districts of Rwanda and construction of other 1000 units is in process. Forty civilians and 350 prisoners have been trained in construction of biogas plants. This in turn has led to the establishment of new small and medium enterprises; as well as more sustainable energy production processes in public sector organizations (KIST, 2010).
- Uganda Martyrs University involved teaching staff and students in a community development programme aimed at improving the livelihoods of communities in a sub-county through sustainable agriculture interventions. The project established a small-scale farmers’ association; supported improved planting materials; an input credit system; and new farming and marketing strategies. The results were improved income; improved varieties

and organic soil conditions; water conservation; and more sustainable livelihoods; as well as improved university–community relations and research and teaching practices (UMU, 2009).

LEADERSHIP SUPPORT AND FUNDING

The GUNi/IAU/AAU (2011) survey shows that institutions with leaders who were rated as having either ‘quite a bit’ or ‘a great deal’ of commitment to SD issues were the only ones that received support for SD activities. The assumption that larger institutions showed more commitment to SD issues was proved wrong in terms of funding as there was no relationship between size of institution and amount of funds allocated for sustainability activities. The GUNi/IAU/AAU (2011, p. 62) survey also reveals a positive relationship between the existence of multi- and interdisciplinary structures and management commitment to SD among university leaders. Institutions with higher levels of management commitment were found to have more multi- and interdisciplinary structures than those with lower levels. While this would need to be more carefully analysed, there appears to be a stronger correlation between leadership commitment and interest, funding generated and/or leveraged for SD activities, and structural changes in universities. Funding for sustainability initiatives in big and small institutions alike ranged from as low as less than \$20,000 per year to over \$200,000. Funding for SD activities in these institutions is received from various sources but mainly from development partners and foundations, governments, the private sector and the university’s internally generated funds.

The MESA Conference Statement (UNEP MESA, 2009, p. 45) states that ‘there is a need for systemic capacity building programmes for university leaders, government officials, civil society and other education sector stakeholders to ensure sustainability and climate change issues are integrated into the teaching, learning and research programmes of higher education institutions, including private universities’. As mentioned above, the actualization of SD in African universities seems to be constituted through a strange mix of ‘bottom up’ and ‘international organization involvement’. Both levels are ‘putting pressure’ on university leadership to become more engaged. A positive signal in this regard is the involvement of university leaders organizations (such as SARUA and the AAU) in engaging university leaders at country level to deliberate SD issues, including climate change and development. As indicated above, SARUA’s actions in this regard are exemplary, as a Deputy Vice Chancellor’s committee

has been established to develop a subregional university programme on climate change and development.

WHAT TRANSFORMATIONS ARE OCCURRING? (ANALYTICAL LENS 4)

It is possible to identify significant transformations that are occurring as a result of the actualization of the 'event' of SD in African universities. Careful analysis of the data shows three key types of transformations:

EPISTEMOLOGICAL RELATIONSHIPS ARE CHANGING

This is seen particularly in the manner in which SD questions and issues 'permeate' the disciplines. Oftentimes this is an 'invisible' process in the sense that disciplines remain unaware of the full range of integrations of SD taking place in other parts of the institution. Similarly, university leaders fail to see the full scope of this 'bottom up' form of integration as it occurs piecemeal, and 'bit by bit'; is not orchestrated from above or through university policy, but is rather a quiet revolution taking place in response to local needs; individual values and commitments; broader changes in the knowledge environment and external influences brought about by global and environmental changes. While it does not represent interdisciplinarity as such, it *lays a fertile foundation* for interdisciplinary approaches; which are beginning to emerge, particularly when located out of, or in association with specific centres that focus on key issues (for example water, poverty, climate change and so on) or with partnership-centred and applied research programmes.

PEDAGOGICAL PRACTICES ARE CHANGING

As shown above, there is also substantive evidence of changing pedagogical practices. These appear to involve shifts towards experiential learning and action centred pedagogies that are also community-engaged. Students are interested in these approaches to learning; and lecturers see new potential in such approaches, particularly for contributing towards solutions for societal change broadly. The MESA (UNEP, 2008) programme in particular, has supported *transformative, action-oriented approaches to learning*, but the need for these approaches was noted in *almost all of the 200 documents reviewed for this study*. Within these is a concern for critical thinking, engaging the potential of indigenous epistemologies, and development of new forms of agency (UNEP, 2008; SADC REEP, 2011). Interesting is that, while this is the case, actual changes in pedagogy are taking

place in a 'piecemeal', bottom-up manner, and are not explicitly being proposed or supported at policy levels (particularly national policy levels).

SOCIAL CRITIQUE AND PARTICIPATORY ENGAGEMENT WITH THE MEANING(S) AND PRACTICES OF DEVELOPMENT ARE INCREASING

As shown above, the actualization of SD in African universities occurs in a variety of 'shapes and forms'; and is underpinned by a variety of philosophical and/or material commitments. There is, however, little dialogue about these differing understandings of SD. Most often documents that refer to SD (particularly institutional documents produced by key institutions such as AAU, UNESCO or UNEP) fail to explicitly engage with the array of meanings that SD appears to hold in African university settings. The interest in SD (from the differing perspectives) is sharpening social critique and/or participatory engagement with the meaning(s) and practices of development. *Dialogical engagement* with the different emerging meanings of SD in African universities can potentially assist with the epistemological 'revitalization' of African universities; creating potentially new social epistemologies, particularly since SD appears to be of interest to a wide range of disciplines. As such, it could provide a 'common language' through which multiple disciplines can become engaged in the process of critically reviewing and revitalizing 'epistemology' and 'purpose' in African universities.

IS MODERN SUSTAINABLE DEVELOPMENT THE ONLY SPECIFICATION OR SOLUTION TO THE PROBLEM? (ANALYTICAL LENS 5)

As noted above, not everything that occurs under the 'banner' of sustainable development is named as such. This is sometimes purposeful (most often in resistance to), or not so purposeful (most often because the issue at hand has a more direct form or referent than the somewhat abstract/ambivalent terminology of sustainable development). The politics of naming university-based changes and activities within the framework of SD therefore warrants some discussion here, particularly since there seem to be many varied interpretations of, and diverse practices emerging in the name of sustainable development in African universities, while the development paradigm of the day remains under critique (sometimes including SD). Does everything that goes under the 'banner' of sustainable development need to be named as such?

Is it, for example feasible to accept that the SARUA initiative to focus on ‘Climate Change, Adaptation and Higher Education’; the University of Cape Town’s initiative appointing a DVC focusing on a university-wide strategy for ‘Climate Change and Development’; or the International Development Research Centre (IDRC) Eco-Health programme are SD actualizations; even if these initiatives are not named as such? And is producing a ‘Global Change’ Grand Challenge National Research Plan for a country (RSA, 2010) an equally valid SD actualization? If this is the case, then one could interpret the ‘event’ of SD as a ‘*broad signifier*’ of changing nature-culture relations; and nature-culture interactions and practices. While this may be so, SD actualizations also require differentiated and critical engagement at various levels; as discussed above – both at the level of problem definition, and at the level of response.

CONCLUSION

Akin-Aina (2010, p. 21) writes critically about the half-century of interventions and waves of ‘reforms’ affecting HE in Africa today. He states that they consist of ‘institutions, systems, and practices that lack distinct values and goals, or a mission and vision connecting them to the major challenges of their local and global contexts’. He argues further that what is needed in African HE is ‘true transformation, which will involve practical and epistemological ruptures with previous ways of doing things and a reconstruction of structures, relations, cultures, and institutions’. With this in mind, the GUNi/IAU/AAU (2011, pp. 68–70) survey makes a number of recommendations and suggestions to inform future sustainability practices in African universities. For example, it concludes that ‘leaders should be targeted’ to further SD actualization in universities. It also concludes that further investment in ‘staff orientation, awareness, and exchange programmes in sustainable development can help equip university employees in sustainability issues’. Mainstreaming through policy development; support for ESD structures; sustainability assessments and information management; student engagement; pedagogical and curriculum reform and so on are also noted as ‘ways forward’. Networking and conferences, establishment of Centres of Excellence and research investments are also key recommendations arising from this survey. Similar sets of recommendations are made in the MESA review (UNEP, 2008) all of which are useful for furthering SD actualization. While these

recommendations are useful at a technical level, they can only really be meaningful if considered within wider transformation agendas.

In his analysis of Houtonji’s work in philosophy, Ochieng (2010, p. 34) comments on some of the problems of later African philosophical works by Appiah, who he argues, conceptualizes the political as ‘essentially consisting of technical problems, as a matter for suitable educated technocrats to puzzle over and solve’. Some perspectives on SD in African universities, as shown in the analysis above, may be making similar assumptions about SD and its relationship to and hence its practices in African universities. Ochieng (2010, p. 34) goes on to say that [in the case of Appiah’s work on the political]: ‘there is little engagement with the historical gravity within which particular problems [such as those described under the SD banner] are contested, little understanding of the fact that many of the deep conflicts in Africa [such as those concerning resource use associated with SD discourses] are powered by radically different *interests*, far more than by a lack of education or a simple matter of conceptual confusions.’

In closing this paper it is important therefore to draw attention to the *problématique*, and indeed the dangers of narrowly or technically interpreting SD in African universities, and to encourage a deeper probing of why SD, which is partially an ‘indigenous foreigner’ on the African continent, is manifesting in such a variety of ways? Reminded by Ferguson (2006) that our academic concepts are often inadequate for the times, we may continue to ask whether SD is or can become an *adequate concept* or ‘*event*’ for education in Africa at this point in time when transnational topographies of power, as described by Ferguson (2006) and Bond (2002; 2006) sustain unequal global and local social policies and practices that continue to ‘structure underdevelopment’ in particular ways. Sustainable development actualization in African universities, while interesting and dynamic, is not simply a technical matter.

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NOTES

- 1 Cited in Larson (2005: 37) in a collection of short stories published with the title 'Under African Skies'. Interestingly, reflections of the cosmology of sustainability in Africa (while not called this) are most often found in African literature, and not as widely found in modern day sciences produced in Africa. This may be a result of the colonial roots of modern day science as practised in universities today. With the advent of sustainable development discourse however, more scientific practices are emerging that reflect more secular versions of this cosmology, as described later in the paper.
- 2 Popkewitz (1990), in his analysis of modern educational institutions, encourages us to produce what he calls 'social epistemologies' of our institutions, to trace the histories of the forms of reasoning that dominate.
- 3 These have post-colonial continuities.
- 4 For example the ancient universities of Timbuktu and Egypt.
- 5 Patton (2006: 112) comments that 'Stating, claiming or naming something is never sufficient to actualize a particular event [such as sustainable development], but ... purely linguistic acts of declaration and attribution are often and sometimes necessary conditions of actualisation'. The politics of description in establishing modern sustainable development in African universities is therefore also of interest in this paper, and needs to be differentiated from 'its spatio-temporal realization in a state of affairs' (Deleuze, 1990, p. 53).
- 6 Over 200 documents were consulted for this review. These included macro-level policy and university assessment documents; international reports on the status of sustainable development in Africa; research papers addressing the topic/aspects of the topic; and available studies on universities and sustainable development in Africa. The two most substantive sources of data providing a consolidated perspective are from the UNEP Mainstreaming Environment and Sustainability in African Universities Network (2008 report, involving 77 universities); and from the recent GUNi/IAU/AAU (2011) survey involving 73 universities. This represents in the region of 10%–15% of universities on the African continent.
- 7 It should be noted here that it was not possible to establish comprehensive data sets across all countries in Africa, hence the trends are based on a reading of the existing data, documents and records pursued. Examples cited here are extracted from this available data, documents and records.
- 8 Only a few African countries have produced ESD Strategies, despite this being a key objective of the UN Decade on Education for Sustainable Development (www.unesco.org/desd).